II. *Revision of the Mexican and Central American* Malachiidae *and* Melyridae, *with descriptions of new species.* By George Charles Champion, F.Z.S.

[Read November 19th, 1913.]

Plate II.

The present paper has been prepared to give an account of the Malachiidae and Melyridae accumulated by the Editors of the "Biologia Centrali-Americana" since the completion of the supplement to the Rev. H. S. Gorham's work on these insects, published in 1886. To determine them the whole of the material in the British Museum named by him has had to be re-examined, and the sex of the specimens ascertained, before the descriptions of the new forms could be drawn up. The other collections in the National Museum, especially that of Fry, have also furnished many novelties from Mexico. Tables of the numerous species of the Malachiid genera *Collops* and *Attalus*, and of the Melyrid genera *Trichochrous* (= *Pristoscelis*, Gorh.) and *Listrus*, are appended. For convenience of reference the species here dealt with are renumbered in the following pages. No fresh material has come to hand of the genera *Helcogaster* (Malachiidae), and *Cymbolus*, *Eucymbolus*, *Astylus*, and *Antixoon* (Melyridae), and they are omitted from the present enumeration. *Eucymbolus* and a new species of *Cymbolus* (*elongatus*) were described by me in the Trans. Ent. Soc. Lond. 1913, pp. 128–130. The genera *Micromimetes*, *Pseudattalus*, *Pseudebaeus*, *Sphinginus*, *Dasytellus*, and *Mecomycter* are additions to the Mexican or Central American fauna.

Fam. MALACHIIDAE.

Collops.

Collops, Erichson, Entomographien, p. 54 (1840); Horn, Trans. Am. Ent. Soc., iii, p. 79 (1870); Gorham, Biol. Centr.-Am., Coleopt. iii, 2, pp. 113 (1882), 313 (1886);

Schaeffer, Canad. Ent. 1912, p. 184; Fall, Journ. N. York Ent. Soc. xx, p. 249 (Dec. 1912).

Collops is a genus distinguished by its 10-jointed antennae in both sexes, and by the males having an enormously developed peculiarly formed second antennal joint (usually furnished with a long appendage) and simple 4-jointed anterior tarsi. The additional material to hand from Mexico, etc., enables me to give the ♂ characters of nearly all the species here enumerated. Horn, in 1870, described, and figured, the articulated appendage (of *C. validus*) arising from near the base of the second joint as resembling an elongated inner maxillary lobe, slender, and furnished at the tip with a brush of stiff curled hairs, and stated that the appendage varied in size and development according to the species. He did not, however, use this essential character for distinguishing the numerous N.-American forms, and Gorham was equally silent on the subject when dealing with the Central American *Collops*, both authors mainly relying on colour. Another important character is the presence in various species of a depressed, goggle-like, polished, subglabrous area on each side of the head before the eyes, sometimes wanting or feebly indicated in ♀. The shape of the first and third antennal joints in ♂, too, often affords good differential characters. The antennae and anterior legs are sometimes differently coloured in the two sexes, and the head in those forms in which the anterior portion is more or less testaceous usually have this pallid space reduced in extent or even wanting in ♀. In certain species the prothorax is variable in colour, the black markings gradually disappearing or becoming greatly extended, but in others it is constantly testaceous or red. The elytra, too, vary in colour, especially in the northern forms, but in the material before me the basal and subapical spots rarely show a tendency to unite into vittae. Fall's important "Review of the North American species of *Collops*" (loc. cit. pp. 249–274) was not seen by me till after the above remarks were written. We are indebted to him for the loan or gift of fifteen critical species, and his determinations of *C. tricolor*, Say, *C. 4-maculata*, F., and *C. histrio*, Er., have been accepted. The accompanying notes have been revised so as to include the valuable information thus obtained. In the subjoined table, and in the remarks on the various species, a few allied

northern or southern forms are included for comparison, the names of such insects being included within square brackets.

Key to the Mexican and Central American species of Collops.

a. Elytra oblong, densely punctate; wings fully developed.
  a[1]. Elytra unicolorous, blue, violet, or black.
    a[2]. Body more robust; legs black, femora sometimes testaceous.
      a[3]. Head uniformly punctate.
        a[4]. Second antennal joint (♂) with a long appendage.
          a[5]. Head black to anterior margin, prothorax and femora testaceous: species large [♂ unknown] . . . . *grandis*, n. sp.
          b[5]. Head (♂ ♀) testaceous in front.
            a[6]. Prothorax bimaculate on disc; testaceous portion of head angularly extending upwards; elytra blue or green: species large . *bipunctatus*, Say.
            b[6]. Prothorax vittate on disc; testaceous portion of head truncate behind; first antennal joint (♂) toothed at apex externally; elytra blue: species moderate in size. . . . . *aulicus*, Er.
            c[6]. Prothorax immaculate; elytra blue: species moderate in size.
              a[7]. First antennal joint (♂) broadly oblongo-subquadrate, concave above . . . . *paradoxus*, n. sp.
              b[7]. First antennal joint (♂) gradually widened outwards . . . . *frontalis*, Gorh.

b^4. Second antennal joint (♂) with a short, slender appendage; prothorax immaculate.

c^5. Head, elytra, and legs black . *nigripennis*, n. sp.

d^5. Head and elytra blue, femora rufo-testaceous . . . *femoralis*, Gorh.

c^4. Second antennal joint (♂) without visible appendage; head and legs black; prothorax immaculate; antennae (♂) partly testaceous.

e^5. Elytra coarsely punctate, violaceous; intermediate antennal joints (♂) strongly transverse, stout; head broad *brevicollis*, n. sp.

f^5. Elytra finely punctate, bluish black; intermediate antennal joints (♂) narrower and longer; head smaller . . [*tricolor*, Say.]

b^3. Head with a smoother subglabrous, depressed area on each side anteriorly, at least in ♂; second antennal joint (♂) with a long appendage.

d^4. Head blue to anterior margin; prothorax immaculate; antennae testaceous at base in both sexes, third joint small in ♂. . . . . *amplicollis*, n. sp.

e^4. Head testaceous in front; prothorax black on disc, or immaculate; antennae wholly testaceous, and with third joint greatly thickened in ♂ . *nigriceps*, Say.

b^2. Body rather slender; head and femora black, tibiae and tarsi testaceous; prothorax spotted or immaculate; elytra blue, finely punctate, widened posteriorly; second antennal joint (♂) with a long appendage . . . . . *parvus*, Schaeff.

b^1. Elytra blue, violaceo-fasciate before middle, the sutural edge and a triangular lateral patch testaceous; head uniformly punctate, dark; prothorax immaculate; legs black;

first antennal joint (♂) long, second with a short appendage . . . *quadricolor*, n. sp.

c^1. Elytra blue, with suture and outer limb testaceous, the prothorax and anterior femora also testaceous; head nigro-violaceous, uniformly punctate; antennae (♂) testaceous, joint 2 with a short appendage, the following joints broad and sharply serrate; elytra subtuberculate . . . . *granellus*, Fall.

d^1. Elytra each with a broad, blue or green, anteriorly constricted vitta on disc, leaving the inner and outer margins testaceous; prothorax spotted or immaculate; head uniformly punctate.

c^2. First antennal joint (♂) broad, and second with a shorter appendage. *vittatus*, Say.

d^2. First antennal joint (♂) narrow, and second with a longer appendage. . . . . *flavolimbatus*, n. sp.

e^1. Elytra cyaneous, with three transversely placed flavous spots, the common median one extending down the suture to the tip; prothorax subcordate, nigro-fasciate; head uniformly punctate. . . . . [*lebasi*, Er.]

f^1. Elytra with the base, or a patch on each, and a still larger subapical patch on disc, blue or green, for the rest rufous or testaceous, like the prothorax.

e^2. Head uniformly punctate.

c^3. Head dark to anterior margin; first antennal joint (♂) rounded at tip, the second with a short appendage.

f^4. Legs black.

g^5. Second antennal joint (♂) transverse, broadly spatulate externally: species large . . . . . *illustris*, n. sp.

h^5. Second antennal joint (♂) longer than broad, with an oblique dentiform projection arising from the base externally: species smaller. 4-*maculatus*, F.

g^4. Legs partly red; second antennal joint (♂) about as broad as long, angularly dilated at about the middle externally . [*femoratus*, Schaeff.]

d^3. Head red or testaceous in front, usually more broadly so in ♂.

h^4. First antennal joint (♂) strongly curved, sinuously excavate externally, and angulate at tip, the second bluntly dilated externally and with a very long appendage.

i^5. Elytra more coarsely punctate, shining; legs black . . . [*histrio*, Er.]

j^5. Elytra more finely punctate, dull; legs and antennae variable in colour, often wholly testaceous . . . *blandus*, Er.

i^4. First antennal joint (♂) strongly curved, simply concave externally, and rounded at tip, the second joint subangularly dilated externally.

k^5. Second antennal joint (♂) with a very long stout appendage *histrionicus*, n. sp.

l^5. Second antennal joint (♂) with a short appendage . *intermedius*, Gorh.

e^3. Head with a sharply trilobed testaceous space in front; second antennal joint (♂) with a long slender appendage.

j^4. Legs and antennae (base excepted) black; elytra dull, the blue spots large and longitudinally confluent . . . [*tibialis*, Schaeff.]

k^4. Legs (femora excepted) and antennae testaceous; elytra shining, the basal blue spots reduced to a transverse fascia . *varipes*, n. sp.

f^2. Head with a smoother, depressed, subglabrous area on each side anteriorly, at least in ♂; second antennal joint (♂) with a long appendage.

f^3. Head black to anterior margin, antennae and legs, and the body in great part, testaceous; elytra closely, finely punctured, the interspaces alutaceous, the dark markings reduced to spots . . [4-*guttatus*, n. sp.]

g^3. Head testaceous in front; elytra more densely punctured.

l^4. Elytral markings more extended: species large.

m^5. Head excavate in front and transversely tumid on each side between eyes, and anterior legs and antennae testaceous, in ♂; prothorax maculate; elytral markings greatly developed . . . *balteatus*, Lec.

n^5. Head not tumid between eyes, and with a prominent, depressed polished area on each side anteriorly, in ♂.

d^6. First antennal joint not toothed in ♂; legs and antennae variable in colour, sometimes wholly testaceous; prothorax spotted or immaculate; elytral markings large . *geminus*, Er.

e^6. First antennal joint toothed, and anterior femora testaceous, in ♂; prothorax immaculate; elytra each with two large spots . . [*ludicrus*, Er.]

m^4. Elytral markings reduced in extent, the basal fascia narrow; prothorax immaculate; legs black: species much smaller . . . . . *conspicillatus*, n. sp.

b. Elytra suboval, rather convex, roughly scabroso-punctate, black, like head and legs; wings not fully developed: species small . . . . . *nigritus*, Schaeff.

1. *Collops grandis*, n. sp.

♀. Broad, black, the elytra wholly blue or bluish-green, the head nigro-caeruleous, the labrum and clypeus, the bases of the mandibles and palpi, the first joint of the antennae, and the outer edge of the next two or three joints, the abdomen, femora, and coxae (the outer edge of the middle pair sometimes infuscate), rufo-testaceous; clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head broad, very densely, finely punctate throughout, the dark colour extending to the anterior margin; antennae with joints 1 and 2 subequal in length, 3–10 moderately serrate. Prothorax strongly transverse, shining, sparsely, minutely punctate. Elytra very densely, finely punctured.

Length 7–7½, breadth 4 mm.

Hab. Mexico, Santa Clara in Chihuahua and Chihuahua city (*Höge*).

Four females. This insect is a little larger than the largest examples of the same sex of *C. bipunctatus*, from all the varieties of which it may be distinguished by the wholly bluish-black head, the immaculate, smoother prothorax, the pallid femora and coxae, and the relatively longer second antennal joint.

2. *Collops bipunctatus*.

Malachius bipunctatus, Say, Journ. Acad. Phil. iii, p. 185; Amer. Ent. iii, and Complete Writings, i, p. 107, t. 48, fig. 5.

Collops bipunctatus, Er., Entomographien, p. 55; Horn, Trans. Am. Ent. Soc. iii, pp. 80, 82; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 113, 313; Fall, Journ. N. York Ent. Soc. xx, pp. 252, 263.

Malachius xanthostomus, Chevr., in Dej. Cat.

♂. Antennae with joint 1 very broad, subtriangular, hollowed above, convex beneath, the curved appendage on joint 2 long.

Additional localities for this species, are :—

Mexico (*Mus. Brit., Truqui; Coffin, in Mus. Oxon.*), Durango city, Mexico city, Irapuato, Jalapa (*Höge*), Orizaba, Puebla (*Sallé*), Amecameca (*Mus. Oxon.*).

A large form, with the head (a deep triangular excision in the middle in front and the anterior margin excepted) and elytra blue or (rarely) green, the prothorax rufo-testaceous, with two black spots of variable size on the disc; the elytra somewhat scabrous. The entire antennae, the sides of the head in front of the eyes, and the tarsi are

sometimes testaceous in the female. Höge sent a long series from Durango. The dark portion of the head is angularly excised in the middle in front in all the specimens before me, irrespective of sex. Fall (loc. cit.) gives the N.-American distribution as " Kansas to the desert regions of southern California," and states that he has seen specimens from Colorado, New Mexico, Utah, and Arizona. According to Mead (Amer. Nat., 1899, pp. 927–929) *C. bipunctatus* is said to destroy *Doryphora*.

3. *Collops aulicus*.

Collops aulicus, Er., Entomographien, p. 55; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 113, t. 6, figs. 21 (♂), 22 (♀).

♂. Antennae with joints 1 and 2 testaceous, streaked with black; 1 broad, subtriangular, hollowed and smooth at the apex posteriorly above, and with the outer apical angle produced into a sharp tooth; 2 very large, subangularly raised towards the apex above, the apical excavation strongly transverse, and with a very long, slender appendage.

Apparently not uncommon in Mexico, and recognisable by the broad blue vitta on the disc of the prothorax, the wholly caeruleous elytra, the blue, densely punctured, closely pubescent head, with the anterior margin in the male broadly, and in the female narrowly, testaceous, the bluish-black legs, and the testaceous abdomen. Gorham's figure of the male (21) shows the shape of the first antennal joint, but the appendage on the second is not clearly indicated.

The uniform sculpture of the head and the form of the male-antennae separate *C. aulicus* from similarly-coloured *C. nigriceps* (*eximius*). The black-legged insects from Utah and Arizona doubtfully referred by Fall to *C. marginicollis*, Lec. (Journ. N. York Ent. Soc. xx, p. 260), possibly belong here. The latter differs from *C. aulicus* in having a smoother head, and subtuberculate elytra, and joints 3–10 of the male-antennae strongly serrate and the appendage of the second joint much shorter.

4. *Collops paradoxus*, n. sp. (Plate II, fig. 1, basal joints of ♂-antenna.)

Collops tricolor, Er., Entomographien, p. 57 (♀) (1840) (part.); Gorh., Biol. Centr.-Am., Coleopt. iii. 2, pp. 113, 313, t. 13, figs. 1, 1*a* (gynand. ♀) (part.).

Malachius paradoxus, Sturm, in litt.

Bluish-black, the anterior margin of the head broadly in ♂, and narrowly in ♀, the labrum and clypeus, the bases of the palpi and mandibles, the antennae with joint 1 in both sexes, 2 in great part above, and 3 and 4 along their outer edge, in ♂, 2–4 along their outer edge in ♀, the prothorax and abdomen, rufous or testaceous, the rest of the head and the elytra violaceous or blue; clothed with fine cinereous pubescence intermixed with very long, erect, black hairs, the adpressed cinereous pubescence on the head long and conspicuous in ♂, more scattered in ♀. Head broad, densely, finely punctate; antennae (♂) with joint 1 very broad, abruptly expanded from near the base externally, oblong-subquadrate, concave above, 2 with a very long, slender, curved appendage, 3–9 moderately serrate, 3 a little wider than 4, (♀) 1 oblong-conic, 2 broad, large, rounded within, 3–5 transverse, serrate. Prothorax strongly transverse, somewhat rounded in front, shining, sparsely, minutely punctate. Elytra densely, rather coarsely punctate, bluntly rounded at the apex. Length 4½–5½, breadth 2¼–2½ mm. (♂♀.)

Hab. Mexico, (*ex coll. Sturm*), Oaxaca (*Sallé, Höge*), Parada (*Sallé*), Mochitlan in Guerrero (*Baron*), Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*).

Apparently a common insect in Oaxaca and Guerrero, whence a long series has been received showing no variation. Erichson's description of this species was taken from a single Mexican example (♀) found by Deppe. The gynandromorphous ♀ from Oaxaca figured by Gorham belongs here. *C. paradoxus* is extremely like *C. frontalis*, Gorh., also from Oaxaca; but differs from it in the male sex in having a densely punctured, more pubescent head, with the testaceous coloration less extended, not reaching the eyes, the first antennal joint concave, and very broadly dilated from near the base, and the second joint with a still longer appendage. The females of the two forms are not easy to separate; but that of *C. paradoxus* may be identified by the slightly longer prothorax, and the less dilated, wholly pale first antennal joint. *C. tricolor* is a smaller insect, with less coarsely punctured elytra, and a non-appendiculate second antennal joint in ♂.

5. *Collops frontalis.*

Collops frontalis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 314.

♂. Antennae with joint 1 wholly testaceous, gradually narrowing

from the base, shaped as in ♀, but broader, 2 black at the apex above, and with a long, curved appendage, 3–7 subequal.

♀. Antennae with joints 1 and 2 subequal in width, 1 infuscate along its inner face.

Hab. Mexico, Oaxaca.

Gorham's diagnosis and general description of this species was taken from three males. He was unaware that the extended testaceous coloration of the head was peculiar to that sex. The female from Etla, labelled *C. frontalis* by him, has the anterior margin of the clypeus only testaceous.

6. *Collops nigripennis*, n. sp.

♂. Oblong, rather narrow, the head and prothorax shining, the elytra dull; the head, elytra, abdomen (the ventral sutures excepted), and legs black, the prothorax testaceous; the antennae with the first joint externally, and the second, except along the outer edge, testaceous, for the rest black; the surface finely pubescent, and also set with long, erect, scattered, blackish, bristly hairs. Head densely punctate, transversely flattened anteriorly, the eyes prominent; antennae with joint 1 strongly curved, widened outwards, longer than broad, somewhat angulate within and almost smooth externally, 2 with a short slender appendage, 3–9 feebly serrate, 3–6 subequal in length. Prothorax strongly transverse, as wide as the base of the elytra, faintly punctate. Elytra subparallel, moderately long, densely, finely punctate.

Length $3\frac{1}{10}$, breadth $1\frac{3}{4}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

One male. Narrower than *C. tricolor*; the head and elytra black; the first antennal joint (♂) strongly curved and much narrower, and the second with a slender appendage; the elytral punctuation fine and dense. The second antennal joint viewed from in front appears to be trilobate externally.

7. *Collops femoralis.*

Collops femoralis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 113, 314.

♂. Antennae with joints 1 and 2 testaceous, 2 suffused with black beneath, 1 curved, elongate-triangular, 2 with a slender, short, rudimentary appendage received beneath the reflexed inner margin of the joint, 3–9 feebly serrate, subequal.

♀. Antennae with joint 1 testaceous, oblongo-conic, rather slender,

Hab. Mexico; Guatemala.

In this species the head is nigro-caeruleous to the anterior margin, the prothorax, femora, coxae, and abdomen are rufo-testaceous, and the elytra violaceous, blue, or greenish. In two examples from Etla, Mexico, the intermediate and posterior femora are infuscate. The Guatemalan types have all three femora rufo-testaceous. The six males before me have a rudimentary appendage to the second antennal joint. *C. honestus*, Er., from the Orinoco, described from a single male, must come near *C. femoralis*; it is said to have the apices only of the femora testaceous.

8. *Collops brevicollis*, n. sp. (Plate II, fig. 2, ♂.)

Bluish-black, the labrum and clypeus, the base of the mandibles, the prothorax, and abdomen rufo-testaceous, the elytra violaceous; the antennae with joints 1 and 2 above, and 3–6 on their outer face, testaceous, for the rest black; clothed with fine cinereous pubescence intermixed with very long, erect, black, bristly hairs. Head moderately broad, densely, finely punctate, bluish-black to the anterior margin, much narrowed anteriorly; antennae (♂) with joint 1 curved, abruptly widened outwards, subsecuriform, 2 longer than broad, angularly dilated at the base and towards the apex externally, without appendage, 3–10 gradually diminishing in width, 3–9 strongly transverse, stout, serrate, (♀) joint 1 oblongo-conic, lineate with black, 2 stout, broad. Prothorax broad, strongly transverse, truncate in front, shining, sparsely, minutely punctate. Elytra coarsely, densely punctate, bluntly rounded at the apex.

Length $4\frac{1}{2}$, breadth $2\frac{1}{2}$–$2\frac{3}{4}$ mm. (♂ ♀.)

Hab. Mexico, Ciudad in Durango 8,100 feet (*Forrer :* ♂), Ventanas in Durango (*Höge :* ♀).

One pair. Near *C. paradoxus* and *C. frontalis*, differing from both of them in the non-appendiculate second antennal joint of the male, these organs being comparatively short, tapering, and conspicuously testaceo-lineate externally to near the tip in both sexes. The prothorax is very short and broad, the elytra broad and coarsely punctate. From *C. tricolor* the present species may be separated by the broad head and prothorax, and the coarsely punctured elytra; and in the male by the strongly transverse, stout intermediate joints of the antennae and the basally angulate second joint.

[*Collops tricolor.*

Malachius tricolor, Say, Journ. Acad. Phil. iii, p. 182; Amer. Ent. iii, and Complete Writings, i, p. 107, t. 48, fig. 3 (*nec* 2) (♀).

Collops tricolor, Horn, Trans. Am. Ent. Soc. iii, pp. 80, 81 (*nec* Erichson, Gorham); Fall, Journ. N. York Ent. Soc. xx, pp. 251, 256 (1912).

♂. Antennae with joint 1 broad, triangular, 2 without visible appendage, 3–9 serrate, subequal.

Hab. North America, Canada and the Middle States to Kansas.

Gorham (Biol. Centr.-Am., Coleopt. iii, 2, p. 313) has called attention to the various forms doing duty for *C. tricolor* (Say); but he does not appear to have seen N.-American examples of the insect identified by Horn as *C. tricolor*, of which there are several from Canada, etc., in the British Museum. These northern specimens, for an additional pair of which from Lyme, Conn., we are indebted to Mr. Fall, have the head wholly black; the basal two or three joints of the antennae (in both sexes) testaceous, and the others more or less infuscate; the prothorax and abdomen rufo-testaceous; the elytra very finely punctured, nigro-caeruleous, sometimes with the epipleura rufo-piceous; and the tarsi rufo- or fusco-testaceous. No appendage to the second antennal joint is visible in the four males of *C. tricolor* before me, or in that of *C. brevicollis*. This character is not mentioned by Fall in his recent revision of the N.-American *Collops*.]

9. *Collops amplicollis*, n. sp.

Bluish-black, the labrum and clypeus, the base of the mandibles, the two basal joints of the antennae above, the prothorax, and a space down the middle of the abdomen, rufo-testaceous or testaceous, the head to the anterior margin in both sexes, and the elytra, violaceous or blue, the tarsi sometimes rufo-piceous in ♀; clothed with fine cinereous pubescence intermixed with very long, erect, black, bristly hairs. Head broad, densely, finely punctate, with a slightly depressed polished space on each side near the eyes anteriorly in ♂; antennae (♂) setose, joint 1 broad, subsecuriform, smooth externally, convex, closely punctate, and suffused with black within, 2 with a long, curved, slender appendage, 3–9 transverse, subequal, (♀) joint 1 oblongo-conic, curved, rather slender. Prothorax moderately transverse, shining, very minutely, closely punctate. Elytra densely, rather coarsely punctate, conjointly rounded at the apex.

Length $4\frac{1}{4}$–5, breadth $2\frac{1}{10}$–$2\frac{1}{3}$ mm. (♂ ♀.)

Hab. Mexico (*Truqui, in Mus. Brit.; Mus. Oxon.*), Puebla (*Sallé*).

Three males and five females. Very like *C. frontalis* and *C. paradoxus*, but with the head wholly violaceous, the abdomen in part black, the prothorax less transverse and more closely punctate, and the elytra more rounded at the apex; the head with a small polished space on each side between the eyes anteriorly, the basal joint of the antennae broadly subsecuriform, and the second joint with a long slender appendage, in the male. In the female from Puebla the basal joint of the antennae is entirely testaceous and the tarsi are rufo-piceous. A small female from Ciudad in Durango (length 3¼ mm.) seems also to belong here.

10. *Collops nigriceps.*

Malachius nigriceps, Say, Journ. Acad. Phil. iii, p. 183 (1823); Amer. Ent. iii, and Complete Writings, i, p. 108, t. 48, fig. 3 (*nec* 2).

Collops nigriceps, Er., Entomographien, p. 56 (♀); Horn, Trans. Am. Ent. Soc. iii, pp. 80, 81; Fall, Journ. N. York Ent. Soc. xx, pp. 252, 262.

Collops eximius, Er., loc. cit. (♂♀); Lec., Proc. Acad. Phil. vi, p. 164.

Var. *Collops floridanus*, Schaeff., Canad. Ent. xliv, p. 185 (1912).

♂. Black, shining, the antennae, the head between their points of insertion, the base of the mandibles, and the abdomen testaceous, the prothorax and femora rufo-testaceous, the elytra bluish-green; clothed with fine cinereous pubescence intermixed with erect, long, scattered, bristly hairs. Head very minutely punctate, with a depressed, polished, glabrous space on each side before the eyes; antennae with joint 1 stout, oblong, widened from near the base, 2 with a long, slender appendage reaching to the middle of 3, 3–10 moderately serrate, rapidly tapering outwards, 3 very stout, nearly as long as 4 and 5 united, 4–9 about as long as broad. Prothorax moderately transverse, very sparsely, minutely punctate. Elytra rugulose, densely, finely punctate, bluntly rounded at the tip.

Length 5, breadth 2⅓ mm.

Hab. United States, Atlantic Coast line from Massachusetts to Florida, Gulf Coast as far as Mobile; Mexico (*Mus. Brit.*).

The above description is taken from a specimen (♂) of the var. *floridanus* received by the British Museum in 1855,

under the MS. name "*Collops saulcyi*, Ch.," and said to be from "Mexico." It has the antennae and head shaped and coloured exactly as in a typical *C. eximius* (= *nigriceps*, Say), ♂, before me from E. Florida, this latter having the legs and a large patch on the disc of the prothorax black. The testaceous, tapering antennae of the male, with unusually stout third joint, and the peculiar sculpture of the head, are the distinguishing characters of the present species. Mr. Fall has sent me a female of *C. nigriceps* from New Jersey for comparison.

11. *Collops parvus.*

Collops punctatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 316 (*nec* Leconte).

Collops parvus, Schaeff., Canad. Ent. xliv, p. 185 (1912); Fall, Journ. N. York Ent. Soc. xx, pp. 251, 256 (1912).

Depressed, black, the labrum, the base of the mandibles, the two or three basal joints of the antennae (except on their lower face in ♂), the prothorax (except a small transverse, evanescent patch on the disc, which is sometimes obsolete), abdomen, tibiae, and tarsi rufo-testaceous, the head aeneous, the elytra blue or violaceous; clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head aeneous to the anterior margin in both sexes, minutely, uniformly punctate; antennae (♂) with joint 1 widened from near the base, 2 with a long, slender, appendage, 3–5 transverse, equal, feebly serrate, 6–9 a little longer. Prothorax shining, moderately transverse, sparsely, minutely punctate. Elytra rather elongate, narrowed towards the base in both sexes, rugulose, and densely, finely punctate.

Length 3½–4, breadth 1⅔–2 mm. (♂ ♀.)

Hab. North America, Arizona, New Mexico, and S. W. Texas; Mexico, Northern Sonora (*Morrison*).

The above description is taken from seven specimens sent by Morrison, one only of which is a male. This is a rather narrow, depressed, feebly developed form, approaching *Anthocomus*. The black femora and clear rufo-testaceous tibiae and tarsi, the relatively narrow prothorax, and the finely punctured, posteriorly widened elytra, readily distinguish *C. parvus*. Fall (loc. cit., p. 256) has already called attention to the incorrect determination of the Sonoran specimens.

12. *Collops quadricolor*, n. sp.

Collops tricolor, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 113 (part.).

♂. Black, the labrum and clypeus, the bases of the mandibles and palpi, joints 1 and 2 of the antennae (the lower surface of 2 excepted), the prothorax, and abdomen testaceous, the head throughout and the elytra bluish-green, the elytra with a narrow elongate-triangular patch at about the middle of the outer margin and the inner edge of the sutural carina testaceous and a common, broad, indeterminate submedian fascia violaceous; clothed with cinereous pubescence intermixed with very long, erect, black, bristly hairs, the cinereous adpressed hairs on the head long and conspicuous. Head densely, uniformly punctate; antennae with joint 1 long, obconic, 2 with a short appendage received in the cavity beneath the reflexed inner margin, 3–9 moderately widened, subequal in width, 3 and 4 about as long as broad, 5–9 slightly longer. Prothorax transverse, shining, sparsely, minutely punctate. Elytra oblong, densely, rather finely punctate.

Length $6\frac{1}{3}$, breadth $2\frac{1}{2}$ mm.

Hab. Mexico, Oaxaca (*Höge*).

One male. It is probable that the peculiar coloration of the elytra of this insect is not constant; but assuming the elytra to be wholly blue the specimen cannot be included under *C. paradoxus* or *C. amplicollis*, and if one of the vittate-series it does not agree with *C. vittatus* or any of its allies. *C. quadricolor* is, therefore, treated as a distinct species for the present. *C. quadricolor* is the only known Mexican form with a common violaceous submedian fascia bordered externally by a narrow oblong-triangular, testaceous patch. It is about the same size as *C. paradoxus*. *C. sublimbatus*, Schaeff., has somewhat similarly coloured elytral margins.

13. *Collops granellus*.

Collops granellus, Fall, Journ. N. York Ent. Soc. xx, pp. 253, 265 (♂♀) (1912).

♂. Head around the points of insertion of the antennae, the antennae themselves, the anterior femora and coxae, and the base of the intermediate femora, testaceous; antennae stout, joint 1 broad, triangular, flattened, a little longer than wide, 2 with a short appendage which is received in repose beneath the inner reflexed

margin of the joint, 3–10 gradually tapering outwards, 3–9 sharply triangular.

Hab. Southern United States, Utah and Arizona; Mexico, Northern Sonora (*Morrison*), Monterey in Nuevo Leon (*Höge*).

Two males from Monterey and a female from Sonora belong to this species, the types of which have been kindly communicated by Mr. Fall. They are closely related to *C. limbellus*, G. & H. (= *limbatus*, Lec.), differing from that insect in having the elytra distinctly tuberculate and with the broad blue vittae extending to the tip, and the antennal joints 3–10 much stouter in the male. This last-mentioned character brings *C. granellus* near *C. vittatus*, which has less strongly serrate antennae in that sex.

14. *Collops vittatus.*

Malachius vittatus, Say, Journ. Acad. Phil. iii, p. 184; Amer. Ent. iii, and Complete Writings, i, p. 108, t. 48, fig. 1 (♂).

Collops vittatus, Er., Entomographien, p. 60 (♂♀); Lec., Proc. Acad. Phil. vi, p. 164; Horn, Trans. Am. Ent. Soc. iii, pp. 81, 83, and Proc. Calif. Acad. Sci. (2) iv. p. 329; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 316 (*nec* p. 114); Fall, Journ. N. York Ent. Soc. xx, pp. 254, 266.

Megadeuterus haworthi, Westw., Trans. Ent. Soc. Lond. ii, p. 98, t. 10, figs. 9, 9*a–e* (♂).

♂. Antennae with joint 1 and the upper side of 2 testaceous, for the rest black, in some examples wholly testaceous, 1 much widened outwards, flattened above and convex beneath, 2 abruptly excised beyond the middle externally (appearing broadly bilobed), the appendage extremely slender and received beneath the reflexed inner margin of the joint, 3–10 moderately widened, serrate, 3–8 transverse, subequal.

♀. Antennae with joint 1 and the outer edges of 2–6 testaceous, for the rest infuscate or black.

Hab. Canada; United States; Lower California; Northern Mexico, Sonora (*Morrison*), Durango city, and Villa Lerdo (*Höge*), Coahuila (*Dr. Palmer*).

A very variable insect, ranging from Canada to Northern Mexico. Examples from Coahuila and Sonora with the antennae and the anterior portion of the head testaceous

in the male appear to have the intermediate antennal joints stouter and more strongly serrate than those with darker antennae and the head wholly nigro-caeruleous. The prothorax in some specimens has a large subquadrate dark patch on the disc, but in others this is reduced to two spots or is altogether wanting. The sutural and marginal stripes on the elytra are always continuous around the apex. The extremely slender appendage of the second antennal joint of the male (not shown by Westwood in his figure 9*c*) is not easily seen. According to Fall, *C. marginellus*, Lec., from the Colorado River, may be known from *C. vittatus* by the very broadly ovate-triangular basal joint of the antennae of the male.

15. *Collops flavolimbatus*, n. sp.

Collops vittatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 114, t. 6, fig. 23 (♀) (*nec* p. 316) (*nec* Say).

Head nigro-aeneous or violaceous, the anterior margin sometimes testaceous, joint 1 of the antennae (a streak along the inner face excepted), 2 above in ♂, 2–4 along their outer edge in ♀, the labrum, clypeus, and base of mandibles, the prothorax (except two spots or streaks on the disc, which are often absent), the suture and outer margin of the elytra to the apex (more broadly so before the middle), and the ventral sutures, testaceous or rufo-testaceous, the rest of the elytra blue or bluish-green, and that of the under surface black; clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head densely, finely, uniformly punctate; antennae (♂) with joint 1 curved, gradually widened outwards, 2 angularly dilated at about the middle externally, the appendage long and slender, curving over the apex of the joint, 3–10 subequal in width, 3–9 about as broad as long. Prothorax transverse, shining, closely, minutely punctate. Elytra densely, rather finely punctate.

Length $3\frac{1}{2}$–4, breadth 2–$2\frac{1}{10}$ mm. (♂ ♀.)

Hab. Mexico (*Truqui; Coffin, in Mus. Oxon.*), Mexico city (*Höge*), Puebla, Orizaba (*Sallé*).

Nine males and seven females. This is the insect figured by Gorham under the name *C. vittatus*, from which it differs in having joints 3–10 of the antennae more slender (being about equal in width in the two sexes), the first joint of the male much narrower and streaked with black, and the second angularly dilated externally and furnished with a long slender appendage in that sex. The prothoracic markings are similarly evanescent, and the elytral

vittae vary in width, but never reach the apex. *C. flavolimbatus* is also considerably smaller than *C. vittatus*. The form of *C. confluens*, Lec., with longitudinally confluent elytral markings comes near the present species; but in *C. confluens* the head and elytra are more coarsely punctate, and the basal joint of the ♂-antennae is slender and entirely testaceous. A female of Leconte's species has been sent me by Mr. Fall. There is a specimen (♂) of *C. flavolimbatus* in the Oxford Museum labelled " N. America."

[*Collops lebasi.*

Collops lebasii, Er., Entomographien, p. 61.

Hab. Colombia (*Mus. Berol.*; *Mus. Oxon.*).

This species, of which two females (including one of Erichson's types) are before me, has the head nigro-violaceous and very finely punctate; the antennae long and stout, with joint 1, and the outer edges of 2 and 3, testaceous; the prothorax unusually long, subcordate, rufous, with a transverse ante-median black fascia; the elytra closely, rather coarsely punctate, cyaneous, with three flavous spots placed transversely before the middle—one, common, extending narrowly down the suture to the tip, the others isolated, marginal; the upper surface shining, finely, sparsely cinereo-pubescent, and also set with long erect black setae.]

16. *Collops illustris*, n. sp. (Plate II, fig. 3, basal joints of ♂-antenna.)

Black, the labrum and clypeus, the bases of the mandibles and palpi, joints 1 and 2 of the antennae (the lower surface of 2 excepted) in ♂, and 1 and the outer edges of 2–4 in ♀, the prothorax, the elytra in part, and the abdomen rufo-testaceous, the head to the anterior margin, and the elytra with the base broadly and a very large patch on the disc towards the apex, extending outwards to the lateral margin, blue or bluish green; clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head densely, finely punctate throughout; antennae (♂) with joint 1 long, curved, gradually widened outwards, 2 dilated externally into a large, broad, spoon-shaped, ciliate, hollow plate, which is followed by an angular vertical expansion of the margin, the cavity at the apex transverse, the appendage feebly developed, not extending beyond the larger cavity and with a few long hairs at the tip, 3–9 feebly serrate, 3–5 subequal. Prothorax transverse,

shining, sparsely, minutely punctate. Elytra densely, rather coarsely punctate.

Length 6–6½, breadth 2⅔–3 mm. (♂ ♀.)

Hab. Mexico, Amula, Omilteme, Xucumanatlan, and Chilpancingo, all in Guerrero (*H. H. Smith*).

Eighteen examples, including eight males. This is a large form of the variable *C. quadrimaculatus* (which occurs in the same localities in Guerrero), differing constantly in the shape of the second antennal joint of the male, the basal joint, too, in this sex is relatively more elongate and less dilated. The females are only separable from those of similarly-coloured *C. quadrimaculatus* by their larger size and broader head.

17. *Collops quadrimaculatus.* (Plate II, fig. 4, basal joints of ♂-antenna.)

Malachius quadrimaculatus, Fabr., Ent. Syst., Suppl., p. 70.

Collops quadrimaculatus, Er., Entomographien, p. 58 (exclud. synon.); Lec., Proc. Acad. Phil. vi, p. 164; Horn, Trans. Am. Ent. Soc. iii, pp. 80, 82; Gorh., Biol. Centr.-Am., Coleopt., iii, 2, p. 315; Fall, Journ. N. York Ent. Soc. xx, pp. 255, 272.

♂. Antennae with joint 1 much widened outwards, convex externally; 2 longer than broad, with a stout, oblique, long, dentiform prominence arising from the base externally, the cavity at the apex large and open, the appendage slender, received in repose beneath the reflexed inner margin of the joint, and not more than half its length.

Hab. United States; Mexico, southward to Guerrero and Oaxaca.

Fall appears to have seen very few examples of *C. quadrimaculatus*. The common Mexican insect here identified under that name agrees, however, with a male communicated by him. The specimens before me, from Indiana, Virginia and Texas (including four males), Mexico and Guatemala, have, as he describes, the second antennal joint of the male longer than broad, and the first joint much widened outwards. These examples have the head wholly violaceous or blackish, the legs black, and the second joint of the male-antenna peculiarly formed and with the appendage rudimentary. The elytral spots vary in size, the anterior one usually extending to the suture

and the larger subapical one often reaching the outer margin. The figure of the antenna is taken from a specimen from Amula, Guerrero.

[*Collops femoratus.*

Collops femoratus, Schaeff., Canad. Ent. xliv, p. 186; Fall, Journ. N. York Ent. Soc. xx, pp. 255, 272.

♂. Antennae with joint 1 strongly curved, convex within, considerably widened outwards, rounded at the outer apical angle; 2 angularly dilated at about the middle externally, the appendage short and slender.

Hab. United States, Arizona.

The antennal characters are taken from a male from Nogales sent by Mr. Nunnenmacher to the British Museum. This insect has the head wholly black, dull, and densely punctate, the two basal joints of the antennae almost entirely testaceous, the bluish-green elytral spots not reaching the outer margin, and the femora and trochanters rufo-testaceous. The southern *C. femoralis*, Gorh., is, of course, a different species.]

[*Collops histrio.*

Collops histrio, Er., Entomographien, p. 59 (♂♀); Horn, Trans. Am. Ent. Soc. iii, pp. 80, 82; Fall, Journ. N. York Ent. Soc. xx, pp. 254, 269 (*nec* Gorham).

Collops argutus, Fall, Occas. Papers Calif. Acad. Sci. viii, p. 242 (1902).

♂. Antennae with joint 1 strongly curved, sinuously hollowed externally, much widened outwards, angularly dilated at the outer apical angle; 2 bluntly dilated at about the middle externally, and with a long, stout appendage; 3–9 feebly serrate.

Hab. N. America, Upper and Lower California, New Mexico, Arizona.

The antennal characters are taken from the male from California sent me by Mr. Fall.]

18. *Collops blandus.* (Plate II, fig. 6, basal joints of ♂-antenna.)

Collops blandus, Er., Entomographien, p. 60 (♀); Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 316 (♂♀).

Collops pulchellus, Horn, Trans. Am. Ent. Soc. iii, pp. 80, 83; Fall, Journ. N. York Ent. Soc. xx, pp. 254, 269.

♂. Antennae with joint 1 strongly curved, sinuously hollowed externally, much widened outwards, and angulate at the outer apical angle; 2 bluntly dilated at about the middle externally, and with a rather stout, long appendage.

Hab. North America, Arizona, Texas; Mexico (*Truqui*), Durango, Morelos, Vera Cruz, and Oaxaca.

The typical form of this species has the antennae and legs wholly testaceous; but if the shape of the basal joint of the male-antenna is to be relied upon, *C. blandus* will have to include examples with joints 3–10 of the antennae, and the legs, black. A short series from Misantla, Vera Cruz, includes all these forms, as well as *C. histrionicus* with rufo-testaceous femora, showing that the colour of the legs and antennae is variable in both insects. The type of *C. blandus*, Er., was from Mexico, that of *C. pulchellus*, Horn, from Arizona. The male of the allied *C. femoratus*, Schaeff., has the head wholly black and densely punctate, the femora red, the first antennal joint moderately widened outwards and rounded at the tip, and the second joint shaped very much as in *C. histrionicus*, but with a shorter and more slender appendage.

19. *Collops histrionicus*, n. sp. (Plate II, figs. 5, 5*a*, basal joints of ♂-antenna.)

Collops histrio, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 114, 315 (part.) (*nec* Erichson, Horn, Fall).

Moderately elongate, the head and prothorax shining, the elytra dull; head violaceous or greenish, rufous or testaceous in front in ♂, more narrowly so in ♀, the palpi and antennae black, the two basal joints of the latter in great part testaceous, the basal joint sometimes immaculate; prothorax rufo-testaceous, immaculate; elytra rufo-testaceous, each with a large basal spot (reaching the suture and outer margin) and a still larger subapical one (reaching the outer margin) blue or bluish-green; legs black, the femora rarely (one specimen from Misantla), and the anterior trochanters frequently, testaceous; abdomen rufescent, the rest of the under surface in great part black; clothed with fine cinereous pubescence intermixed with an abundance of long, erect, blackish, bristly hairs. Head closely, minutely, uniformly punctate. Prothorax transverse, convex, very sparsely, minutely punctulate. Elytra densely, moderately coarsely punctate.

♂. Antennae with joint 1 strongly curved, moderately widened

outwards, convex within, rounded at the outer apical angle; 2 broader than long, angularly dilated at about the middle externally, and with a very long, stout, strongly retractile appendage, the matted pencil of long hairs at the tip of the latter in repose curving round to the lower surface at the apex of the joint; 3–9 feebly serrate, subequal.

Length 3½–4½ mm. (♂ ♀.)

Hab. Mexico, Northern Sonora, Chihuahua, Vera Cruz, Oaxaca, Chiapas; Guatemala, San Geronimo, etc.

Not uncommon in Mexico and Guatemala. The specimens quoted by Gorham from Panama belong to his *C. intermedius*, those from Etla and Ventanas, Mexico, to *C. 4-maculatus*, and the others to the present species. The latter is extremely like *C. 4-maculatus*, but is separable therefrom by the differently shaped first and second joints of the male-antenna, and the very elongate, stout appendage to the second joint. The head is always testaceous between the points of insertion of the antennae in the male, the pale border being much narrower in the female. The elytral spots vary in size. One specimen (♂), amongst several from Misantla, Vera Cruz, has the femora testaceous, as in *C. femoratus*, Schaeff. (a male of which from Nogales is before me), from Arizona, the latter having a more closely punctate, dull, black head, and the basal joints of the antennae differently shaped. A large male from Guatemala city, apparently belonging here, is almost as shining as *C. geminus*, from which it differs in the uniformly punctured head. *C. histrionicus* is, in fact, one of several very closely allied, similarly coloured forms, which can only be satisfactorily identified by the structure of the male antenna. Mr. Fall has been kind enough to send me a pair of the species identified by him as *C. histrio*, Er., from the same region as the type, California, and there is no reason to doubt the correctness of his identification. The true *C. histrio* has more coarsely punctate elytra than *C. histrionicus*, and the first joint of the male-antenna excavate posteriorly and angularly dilated at the outer apical angle (as in *C. blandus*), and the second joint subangularly dilated at about the middle externally. *C. scutellatus* and *C. similis*, Schaeff., from Texas and Utah respectively, both based on insufficient material, are unknown to me; but they are not likely to be conspecific with the insect here described under the name *C. histrionicus*.

20. *Collops intermedius.*

Collops intermedius, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 315 (♂♀).

♂. Antennae with joint 1 curved, much widened outwards, rounded at tip; 2 with a short, slender appendage, which is entirely received in repose in the large cavity.

Hab. Panama, Chiriqui, Panama.

Extremely like *C. histrionicus*, but distinguishable therefrom by the shorter and more slender appendage of the second antennal joint of the male. The head in both sexes is testaceous between the points of insertion of the antennae. The basal joint of the latter is streaked with black in the female and sometimes in the male also. The more shining surface, deeper colour, and less densely punctate elytra, characters relied upon by Gorham, are of no value, when series of the two forms are compared. The head is somewhat deeply transversely depressed anteriorly in the male, obsoletely so in the female. A female from Los Frailes, Costa Rica (*Mus. Brit.*), with entirely dark head, may belong here.

[*Collops tibialis.*

Collops tibialis, Schaeff., Canad. Ent. xliv, p. 186; Fall, Journ. N. York Ent. Soc. xx, pp. 254, 271.

♂. Antennae with joint 1 curved, moderately widened outwards, convex within, rounded at the outer apical angle; 2 broader than long, angularly dilated at about the middle externally, the appendage long and slender.

Hab. United States, Arizona and New Mexico.

Antennal characters taken from a male from Chiricahua Mts., Arizona, sent by Mr. Fall. This insect has the yellow anterior portion of the head trilobate behind, and the large blue elytral spots longitudinally confluent.]

21. *Collops varipes*, n. sp.

♂. Rather short, shining, nigro-caeruleous, the head around and between the points of insertion of the antennae and in the middle anteriorly, the labrum and clypeus, the bases of the mandibles and palpi, the antennae, the prothorax, the elytra in part (except a rather broad, common fascia at the base, and a large subapical spot reaching the outer margin), the abdomen, tibiae and tarsi

testaceous, the rest of the elytra violaceous; clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head densely, very finely punctate, transversely depressed in front; antennae with joint 1 broadly widened outwards, curved, convex within, 2 transverse, subangularly dilated externally, with a very long, slender, curved appendage, 3–9 transverse, subequal, feebly serrate. Prothorax transverse, minutely punctate. Elytra comparatively short, densely, rather finely punctate.

Length $3\frac{1}{10}$, breadth $1\frac{4}{5}$ mm.

Hab. Mexico, Acapulco (*Höge*).

One male. A small, comparatively short form, approaching *C. histrionicus* and *C. blandus*, with testaceous antennae, prothorax, tibiae, and tarsi, and nigro-caeruleous femora, the testaceous anterior portion of the head trilobed, the elytra somewhat finely punctate and with the rather narrow, common, violaceous basal fascia truncate behind. The antennae are slightly infuscate towards the tip and the appendage of the second joint is very long and slender. *C. tibialis*, Schaeff., from Arizona and New Mexico, is a nearly allied insect, with a longer, narrower, and less sinuate basal joint to the male-antenna, the elytra less shining, etc.

[*Collops quadriguttatus*, n. sp.

♂. Rather elongate, shining, testaceous, the head to the anterior margin and sterna black, the scutellum and elytra each with a large patch at the base and a still larger one on the disc towards the apex, neither of them reaching the suture or outer margin, nigro-caeruleous, the posterior femora and tibiae slightly infuscate; sparsely clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head sparsely, minutely punctate, depressed and smoother on each side before the eyes; antennae long, joint 1 strongly curved, much widened outwards, hollowed externally, 2 with a very long, curved appendage, 3–10 decreasing in width, longer than broad, 3 acutely serrate. Prothorax large, transverse, very sparsely, minutely punctate. Elytra closely, finely punctate, the interspaces between the punctures densely alutaceous.

Length 5, breadth $2\frac{1}{3}$ mm.

Hab. California (*Mus. Brit.*).

One male. This N.-American insect was received many years ago by the British Museum, and as it cannot be identified with any of the species enumerated by Fall,

I have ventured to name it. The excavate, antero-lateral portions of the head bring it near *C. geminus*, and the pale limbs are suggestive of typical *C. blandus* (*pulchellus*). From all the varieties of *C. geminus* the present species may be separated by the more sparsely punctate elytra and the wholly black, comparatively smooth head. *C. scutellatus*, Schaeff., based on a single male from Texas, is somewhat similarly coloured, but, according to Fall, it has a feebly dilated subcylindrical basal joint to the antennae.]

22. *Collops balteatus.*

Collops balteatus, Lec., Proc. Acad. Phil. vi, p. 230; Horn, Trans. Am. Ent. Soc. iii, pp. 80, 83; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 315; Fall, Journ. N. York Ent. Soc. xx, pp. 255, 273.

♂. Head canaliculate on vertex, broadly hollowed in front (appearing transversely tumid on each side between the eyes) and also with a large depressed, smoother area on each side anteriorly; antennae with joint 1 curved, broadly widened from near the base, convex above, 2 with a very long appendage; anterior legs in great part testaceous.

♀. Head flattened anteriorly, without smoother depressed lateral area; legs black.

Hab. United States, Texas; Mexico (*Mus. Brit.*), Tampico (*Haldeman, sec. Leconte*); Nicaragua, Managua (*Sallé*).

I have seen six specimens of this species, one only of which is a male. *C. balteatus* comes very near some of the varieties of *C. geminus*, but it may be separated from them by the form of the anterior portion of the head in the male. The head is black, with an angularly excised testaceous space in front; the prothorax has two large black spots on the disc, which are often coalescent; the blue patches on the elytra are much more extended, usually leaving only a narrow transverse ante-median fascia, and the suture and outer limb, rufo-testaceous. The Managua example (♀) was referred by Gorham to *C. geminus*.

23. *Collops geminus.*

Collops geminus, Er., Entomographien, p. 58 (♀); Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 113, 314 (part.).

Collops decorus, Er., loc. cit. p. 59 (♂); Gorh., loc. cit. p. 114.

Collops validus, Horn, Trans. Am. Ent. Soc. iii, pp. 80, 82, fig. (♂), and Proc. Calif. Acad. Sci. (2) iv, p. 329; Gorh., loc. cit. p. 314; Fall, Journ. N. York Ent. Soc. xx, pp. 254, 268.

♂. Antennae with joint 1 curved, widened from near the base, 2 with a very long, curved appendage, 3–9 feebly serrate, 3 a little longer than 4.

Hab. Lower California; Mexico; Guatemala; Nicaragua; Venezuela.

A large, variable form, with quadrimaculate elytra, distinguishable amongst its allies by the concave, smoother, subglabrous space on each side of the head anteriorly, this being especially conspicuous in the male. The testaceous portion of the front of the head is equally developed in the two sexes, and always angularly excised in the middle. *C. geminus* has two evanescent black spots on the prothorax, and the anterior femora in some examples rufo-testaceous; *C. decorus* has an immaculate prothorax and the legs sometimes in part testaceous; *C. validus* has the prothorax spotted or immaculate, and the legs wholly or in part, and the abdomen, testaceous. The male-antenna (of *C. validus*) has been figured by Horn. Gorham, for want of material, left the determination of *C. decorus* as somewhat doubtful. The pale-legged form (*C. validus*), the type of which was from Yaqui in Sonora, has been found at Acapulco and Mazatlan by Höge, and at Presidio and Milpas in Durango by Forrer, all these localities being in N. Mexico. The elytra usually have the outer limb testaceous from a little below the shoulder, but in one specimen the second spot reaches the outer margin.

[*Collops ludicrus.*

Collops ludicrus, Er., Entomographien, p. 60 (♀).

♂. Head broadly depressed in front and with a shallow depressed smoother area on each side anteriorly; antennae with joint 1 strongly curved, broadly widened, and armed with a small tooth on the inner edge towards the apex, 2 with a very long, curved appendage, 3–9 subequal, moderately serrate; anterior femora rufo-testaceous.

♀. Head flattened anteriorly; legs black.

Hab. Antilles, St. Domingo.

There is a pair of this species in the British Museum, the male being now described for the first time. *C. ludicrus* resembles *C. geminus*, var. *decorus*, in colour, except that the blue elytral spots are rather smaller; but is easily recognisable by the toothed basal joint of the antennae of the male. The testaceous portion of the head is similarly excised in the middle in both sexes, but the depressed area on each side in front is shallow and inconspicuous. The male of *C. dux*, Fall, from Texas, appears to have a similarly formed basal joint to the antennae.]

24. *Collops conspicillatus*, n. sp. (Plate II. figs. 7, 7*a*, ♂.)

♂. Black, the base of the mandibles, the inter-antennal portion of the head, the basal joint of the antennae (except a broad streak along the upper face), the concave upper portion of the second joint, the prothorax, the elytra in part (except a narrow common fascia at the base and a large subapical patch not reaching the outer margin), and abdomen rufo-testaceous, the rest of the elytra blue or violaceous and that of the head bluish-black; clothed with fine cinereous pubescence intermixed with long, erect, black, bristly hairs. Head (fig. 7*a*) densely, finely punctate, with a polished, aeneous, subglabrous, concave space on each side anteriorly; antennae with joint 1 curved, moderately widened outwards, 2 with a very long, slender, curved appendage, 3–9 feebly serrate, subequal in width. Prothorax shining, broad, transverse, sparsely, minutely punctate. Elytra densely, rather coarsely punctate.

Length $4\frac{3}{4}$, breadth $2\frac{1}{8}$ mm.

Hab. Mexico, Omilteme in Guerrero, 8,000 feet (*H. H. Smith*).

Four males. This species agrees with *C. geminus* (*decorus*) in having a concave, smoother, subglabrous space on each side of the head anteriorly; but in general appearance it is more like *C. histrionicus*, except that the prothorax is broader and the blue basal portion of the elytra is much less developed.

25. *Collops nigritus.*

Collops nigritus, Schaeff., Canad. Ent. xliv, p. 185 (♂); Fall, Journ. N. York Ent. Soc. xx, pp. 252, 259 (♂).

♀. Opaque, somewhat convex, black, the labrum, the base of the mandibles, the basal joint of the antennae in part and the outer

edge of the second, the prothorax, and the outer margins of the ventral segments rufo-testaceous, the anterior femora piceous; clothed with cinereous pubescence intermixed with very long, coarse, erect, black, bristly hairs. Head very densely punctate; antennae with joints 3–9 subequal in length, 2 stout, subtriangular. Prothorax transverse, closely, minutely punctate. Elytra rather convex, somewhat oval, densely, coarsely, scabroso-punctate.

♂. Antennae with joint 1 strongly curved, rather long, moderately widened and somewhat flattened outwards, subangulate at about the middle within; 2 broader than long, angularly dilated at the base externally, and with a long slender appendage; 3–10 moderately serrate.

Length $3\frac{3}{4}$, breadth $1\frac{3}{5}$ mm.

Hab. Mexico, Northern Sonora (*Morrison*).

One female, found mixed with the specimens identified by Gorham as *C. punctatus*, Lec., the others belonging to *C. parvus*, Schaeff. A peculiar form, with roughly punctured, somewhat oval, black, coarsely setose elytra, an opaque closely punctate head and prothorax, etc. Mr. Fall has been kind enough to lend me a male of *C. nigritus*, and there can be no doubt as to the determination of the species, the female of which has not been described. The wings are imperfectly developed or absent, as in the allied *C. cribrosus*, Lec. The ♂-characters are taken from the Arizona example before me. *C. punctatus*, Lec., has a smoother prothorax, more parallel, metallic elytra, a less transverse second antennal joint in the male, etc.

Attalus.

Attalus, Erichson, Entomographien, p. 89 (1840); Horn, Trans. Am. Ent. Soc. iv, pp. 109, 110 (figs.), 119 (1872); Gorham, Biol. Centr.-Am., Coleopt. iii, 2, pp. 118, 318 (part.); Abeille de Perrin, Ann. Soc. Ent. Fr. 1890, pp. 364, 400.
Anthocomus, sect. II, III, Erichson, loc. cit. pp. 100, 101.
Acletus, Leconte, Proc. Acad. Phil. 1852, p. 167.
Scalopterus, Motschulsky, Bull. Mosc. 1859, p. 406.
Anthocomus, Gorham, loc. cit. pp. 114, 317 (part.).
Ebaeus, Gorham, loc. cit. p. 120 (part.).

A holarctic genus including a large number of Central American forms. All the Central American *Attali* (*A. fuscescens* = *calcaratus* excepted) are left where Gorham

placed them, but his *Anthocomi*, *A. discimacula* excepted, belong to *Attalus* (type *A. lusitanicus*, Er.) as here understood, and his *Ebaeus aeneovirens* also. The key to the identification of the fifty-two species here dealt with is mainly based upon the colour, sculpture and vestiture of the elytra, so as to include both male and female, one sex or the other of many of them not being represented in the material before me. The colour of the head, prothorax, and legs is often variable, and that of the head and legs sometimes differs sexually; characters taken from these portions of the insect are, therefore, apt to be misleading. Gorham called attention to the peculiarly shaped trochanters of the male of *A. caraboides* (suggestive of certain species of Silphidae), and to the apically elongated posterior tibiae of the female of *A. fuscescens* (= *calcaratus*), an insect here transferred to *Anthocomus*; but the last-mentioned character is still present in one species of *Attalus*, *A. varicus*. *A. coelestinus* and *A. mexicanus* (like *Tanaops*, Lec.), want the upper lobe to the second anterior tarsal joint of the male, but they can remain for the present under *Attalus*. *A. nitidiceps*, *A. connexus*, etc., have an elongated head as in *Tanaops*, but they have the antennae inserted near the anterior margin of the head. Eighteen of the twenty-seven new species now added are represented by single examples showing that many others must occur in the region. The names of two species described by Gorham (*sericans* and *limbatus*) are preoccupied for European forms and have to be changed.

Key to the Mexican and Central American species of Attalus.

a. Anterior tarsi of ♂ with joints 1 and 2 thickened, oblique, 2 lobed above, 2 and 3 freely articulated.

*a*¹. Anterior tarsi of ♂ with joints 1 and 2 clearly separated; posterior tibiae of ♀ sometimes slightly produced at inner apical angle (*A. nigroaeneus* and *A. laevifrons*.)

*a*². Elytra depressed or feebly convex to near apex, usually narrower and less dilated posteriorly in ♂.

*a*³. Elytra not plicate or carinate laterally; palpi slender.

a^4. Head more or less elongated behind the eyes.
  a^5. Body not uniformly coloured above.
    a^6. Elytra violaceous; legs black; head narrow . . *nitidiceps*, n. sp.
    b^6. Elytra testaceous, each with the base and a large oval patch violaceous.
      a^7. Head oblong; legs comparatively stout; tibiae and tarsi clear testaceous: species larger . *connexus*, n. sp.
      b^7. Head subovate; legs slender; knees only testaceous: species small [♂ unknown] . *ovaticeps*, n. sp.
  b^5. Body uniformly coloured above, black or aeneous (the anterior portion of head, and sometimes the outer limb of elytra also, flavescent in *A. malachioides*).
    c^6. Head entirely dark; legs black or piceous.
      c^7. Elytra scabrous and subopaque, densely pubescent and hirsute; prothorax densely punctate [♂ unknown] . . *gorhami*, n. n. [*sericans*, Gorh.].
      d^7. Elytra finely punctate, shining, the longer hairs fine; prothorax polished . . . . *nigritulus*, Gorh.
    d^6. Head sharply flavo-marginate in front; legs pale; elytra densely punctulate; prothorax shining . *malachioides*, n. sp.
b^4. Head shorter, transverse as seen from above.
  c^5. Body not uniformly coloured above.

e^6. Elytra black, long, opaque, setose; prothorax testaceo-marginate.
  e^7. Prothorax shining: species large . . . *plagiatus*, Gorh.
  f^7. Prothorax opaque: species smaller [♂ unknown] . . . . . *opacipennis*, n. sp.
f^6. Elytra metallic.
  g^7. Elytra shining, violaceous (a small faint streak at the sides excepted), setose and closely pubescent; antennae long and stout . . . . . *byssinus*, Er.
  h^7. Elytra shining, green, finely pubescent; head and prothorax testaceous . . . . . *aeneopicipennis*, Gorh.
  i^7. Elytra duller and more rugose, violaceous or nigro-caeruleous, finely pubescent; head black.
    a^8. Epistoma (♀) tumid [♂ unknown] . . *hepburnius*, Gorh.
    b^8. Epistoma (♀) flattened [♂ unknown] . . *crux-nigra*, n. sp.
g^6. Elytra testaceous, with violaceous spots; prothorax rufescent; antennae very elongate in ♂: species large . . . *forticornis*, n. sp.
h^6. Elytra testaceous, with black spots.
  j^7. Prothorax nigro-bimaculate or almost wholly black; upper surface densely, finely punctate.
    c^8. Prothorax ample, nearly or quite as wide as elytra . . *maculosus*, Gorh.

d^8. Prothorax small, much narrower than elytra [♂ unknown] . . *sexguttatus*, n. sp.

k^7. Prothorax rufescent; upper surface more shining, more sparsely punctate [♂ unknown] *pusillus*, Gorh.

i^6. Elytra violaceous, with apex yellow . . . . *teapanus*, n. sp.

j^6. Elytra red, often black at base . . . . . *rufipennis*, Gorh.

k^6. Elytra red, with base violaceous . . . . . *nigricornis*, n. sp.

l^6. Elytra fuscous or metallic, with suture in part or entirely, and sometimes outer limb also, testaceous or whitish.

l^7. Elytra very densely punctate, scabrous, dull [♂ unknown] . . . *scabripennis*, n. sp.

m^7. Elytra densely, finely punctate, finely pubescent.

e^8. Femora testaceous at base; upper surface rather dull, dorsal portion of elytra blackish: species large . . . . *verberatus*, Gorh.

f^8. Femora black at base; upper surface shining; dorsal portion of elytra violaceous: species very small . *albomarginatus*, n. sp.

n^7. Elytra more sparsely punctate, shining.

g^8. Upper surface conspicuously nigro-setose; prothorax flavo-marginate . . *albolimbatus*, n n. [*limbatus*, Gorh.].

h^8. Upper surface finely pubescent, setae inconspicuous.

a^9. Dorsal portion of elytra fuscous or fusco-violaceous; prothorax flavo-marginate . . *cinctus*, Lec.

b^9. Dorsal portion of elytra green; prothorax maculate on disc . . . *viridivittatus*, n. sp.

m^6. Elytra testaceous, with an anteriorly evanescent (except in dark var.) fuscous dorsal vitta; abdomen largely exposed, last dorsal segment deeply foveate in ♂; upper surface nigrosetose . . . *tabogensis*, Gorh.

n^6. Elytra testaceous, with a common, elongate-triangular, aeneous scutellar patch . . . . . *scutellaris*, Gorh.

o^6. Elytra testaceous, dull, setose . . . . . *anthobioides*, Gorh.

p^6. Elytra black or piceous, flavo-fasciate.

o^7. Elytra somewhat convex, very shining; legs not wholly testaceous [♂ unknown] . . . . *subfasciatus*, Gorh.

p^7. Elytra flatter and less shining; legs testaceous.

i^8. Head very broad, and antennae elongate in ♂; prothorax ample *megalops*, n. sp.

j^8. Head small, and antennae very short, in ♂; prothorax short. *debilicornis*, n. sp.

q^6. Elytra black, fusco-violaceous, or purplish, sparsely, minutely punctate, glaucous or opalescent, with, at most, the outer margin or apex pale.

q^7. Elytra unicolorous [♂ unknown] . . . . *sapphirinus*, Gorh.

r^7. Elytra with outer limb and apex flavescent [♂ unknown] . . . *glaucus*, n. sp.

s^7. Elytra with outer limb only flavescent [♂ unknown] . . . . . *opalinus*, Gorh.

d^5. Body uniformly coloured above; legs in part or entirely infuscate.

r^6. Body black, the elytra at most, faintly metallic, shining.

t^7. Anterior legs in part and base of antennae testaceous; elytra sparsely punctulate, black . . *laeviusculus*, n. sp.

u^7. Legs wholly piceous; antennae darker; elytra with faint brassy lustre.

k^8. Posterior tibiae strongly bowed; eyes prominent; vertex grooved; elytra sparsely punctulate [♂ unknown] *sulcifrons*, n. sp.

l^8. Posterior tibiae straighter; eyes not prominent; vertex not grooved; elytra closely punctate [♂ unknown] . . . *atratus*, n. sp.

s^6. Body aeneous or greenish, the prothorax at least shining; legs (except in *A. laticollis*) in great part or entirely testaceous.

v^7. Trochanters of ♂ spiniform or spatuliform . *caraboides*, Gorh.

w^7. Trochanters of ♂ (at least in *A. nigroaeneus*) simple.

m^8. Elytra with intermixed long, erect hairs, the punctuation very fine and close; surface shining.

c^9. Legs in part testaceous, femora infuscate . . . *nigroaeneus*, Gorh.

d^9. Legs wholly testaceous [♂ unknown] *laevifrons*, n. sp.

n^8. Elytra without erect hairs, the pubescence whitish, the punctuation dense; surface duller; legs dark . *laticollis*, Er.

t^6. Body plumbeous or olivaceous, wholly opaque and densely, minutely scabroso-punctate above; legs dark.

x^7. Head narrow; elytra widened posteriorly [♂ unknown] . . . *plumbeus*, n. sp.

y^7. Head broad; elytra longer and subparallel [♂ unknown] . . . *olivaceus*, n. sp.

b^3. Elytra simply plicate laterally, red, with base and subapical spot black; palpi stout . . . . *plicatus*, n. sp.

c^3. Elytra sharply carinate laterally, red, with base only black; palpi stout . . . . . *carinatus*, Gorh.

b^2. Elytra convex and dilated posteriorly in both sexes, metallic; palpi stout.

d^3. Body elongate.

c^4. Upper surface brilliant golden-green, front of head and legs testaceous: species large [♂ unknown] . . . . . *viridimicans*, n. sp.

d^4. Upper surface dull, uniformly brassy; femora infuscate: species small [♂ unknown] . *chalceus*, n. sp.

e^3. Body short; upper surface in part or entirely aeneous.

e^4. Head, prothorax, and elytra aeneous or greenish; elytra coarsely punctate . . . . *aeneovirens*, Gorh.

f^4. Head in part, and margins of prothorax completely flavous, elytra aeneous, more finely punctate . . . . . *flavomarginatus*, n. sp.

b^1. Anterior tarsi of ♂ with joints 1 and 2 apparently fused; posterior tibiae produced into a long spine in ♀, and slightly produced at tip in ♂; palpi slender; elytra even, red, nigro-maculate at base . . . . . *varicus*, n. sp.

b. Anterior tarsi of ♂ with joints 1 and 2 thickened, oblique, 2 not lobed above, 2 and 3 freely articulated; palpi slender; elytra metallic, violaceous or green [? *Tanaops*, Lec.].

c^1. Basal joint of anterior tarsi (♂ ♀) short, 3 thickened in ♂; elytra conspicuously nigro-setose . . . . . *coelestinus*, Gorh.

d^1. Basal joint of anterior tarsi (♂ ♀) longer, 3 not thickened in ♂; elytral vestiture finer . . . . . *mexicanus*, Pic.

1. *Attalus nitidiceps*, n. sp. (Plate II, fig. 8, ♂.)

Elongate, widened posteriorly, shining; black, the clypeus and mandibles, the anterior portion of the head in ♂ (leaving the posterior limit of the pallid coloration sharply tridentate), the sides of the front in both sexes, the basal joints of the antennae in part, the prothorax (except a broad median vitta or oblong patch on the disc), the coxae and trochanters, and the base of the femora and of the anterior tarsi and the anterior tibiae in part in ♂, testaceous, the head aeneous, the elytra violaceous, the tarsi and tibiae piceous; finely pubescent and also set with scattered erect hairs. Head longer than broad, narrow in ♀, the exposed post-ocular portion as long as the eyes, polished, very sparsely, minutely punctulate, the front broadly excavate and shallowly bifoveate; antennae moderately long, shorter in ♀, rather slender. Prothorax as long as broad, narrow, very sparsely, minutely punctulate. Elytra long, much broader than the prothorax, widened to the apex, the latter

bluntly rounded in ♀ and obliquely subtruncate in ♂; closely, finely punctate. Legs long and slender.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, nearly reaching the apex of 3, fringed with closely packed minute black setae at the tip beneath.

Length (excl. head) 2¾–3 mm. (♂ ♀.)

Hab. Mexico (*Truqui, in Mus. Brit.:* ♂ ♀), "Temisco" [? Temascala in Puebla] (*Mus. Oxon.:* ♀).

One male and three females. Near *A. connexus*, but with the exposed basal portion of the head less developed, a narrower prothorax, wholly violaceous elytra, and more slender darker legs; the head and femora are differently coloured in the two sexes. The head in this species and *A. connexus* is elongated much as in the N.-American genus *Tanaops*; but the antennae in the latter are inserted much nearer the eyes and at a considerable distance from the anterior margin of the head. The specimen from "Temisco" in the Hope Museum at Oxford is a small female with the head a little less developed than in the types.

2. *Attalus connexus*, n. sp. (Plate II, figs. 9, 9*a*, ♂.)

Moderately elongate, widened posteriorly, shining; black, the clypeus, the sides of the head in front, the antennal joints 1–5 externally, the prothorax (an oval spot on the disc excepted), the elytra with the outer limb, apex, and a common, transverse, angulate, interrupted, median fascia, the latter extending down the suture to the tip (enclosing a large, oval, subapical metallic patch on the disc), the trochanters in part, the tibiae, tarsi, and abdomen testaceous or flavo-testaceous, the rest of the elytra bluish-green; sparsely clothed with short cinereous pubescence intermixed with longer, erect hairs. Head elongate (the post-ocular portion greatly developed, the eyes thus being distant from the prothorax), polished, very sparsely and minutely, the base densely, punctulate, the front slightly hollowed between the eyes; antennae moderately long. Prothorax about as long as broad, convex, minutely punctulate. Elytra long, wider than the prothorax at the base, much widened posteriorly, abruptly declivous at the apex, the apices separately rounded, closely, finely punctate. Legs rather stout, the posterior tibiae feebly curved.

♂. Anterior tarsi with the prolonged upper portion of joint 2 narrow, reaching the apex of 3.

Length (excl. head) 2⅝–3 mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

Two males. Recognisable by the prolonged post-ocular portion of the head, the rather stout legs, the testaceous tibiae and tarsi, and the arrangement of the bluish-green elytral markings, the very large, oval, subapical spot being connected with the common basal fascia by a narrow line on the disc. This species belongs to Horn's first section of the genus and must come near *A. oregonensis*. The head is polished and almost smooth between the eyes.

3. *Attalus ovaticeps*, n. sp. (Plate II, fig. 10, ♀.)

♀. Moderately elongate, slender, widened posteriorly, shining; black, the anterior half of the head, the basal joints of the antennae (the upper side of joint 1 excepted), the prothorax (a narrow elongate streak on the disc excepted), anterior trochanters, knees, and tibiae and tarsi in part, rufescent or testaceous; the elytra with a common basal fascia and a very large oval patch on the disc (occupying about half the length of each elytron and extending outwards to the lateral margin), these markings subcoalescent at the middle, bluish-green, and the rest of their surface flavo-testaceous; finely pubescent. Head greatly developed behind the eyes, subovate, minutely punctulate, bi-impressed in front, the eyes not prominent; antennae short, slender, joints 5–10 not much longer than broad. Prothorax transverse, convex, broader than the head, much rounded at the sides; polished, very sparsely, obsoletely punctulate. Elytra a little broader than the prothorax, gradually widened posteriorly, leaving the last two abdominal segments exposed; transversely rugulose and finely punctate. Legs very slender; posterior tibiae almost straight.

Length (excl. head) $2\frac{1}{6}$ mm.

Hab. Mexico, La Noria in Sinaloa (*Höge*).

One female. This insect has the elytra coloured as in *A. connexus* (except that the large oval patch is extended to the outer margin); from which it differs in its less elongate, subovate head, the more rounded sides of the prothorax, the slender legs and antennae, the slender build, and the much smaller size.

4. *Attalus gorhami*, n. n.

Attalus sericans, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 118 (*nec* Erichson).

Hab. Guatemala, Vera Paz.

The unique type of this peculiar species is a female. It has the general facies of a *Dasytes*, and may be known

by its greenish-aeneous colour, and the dense, cinereous pubescence intermixed with very long, erect bristly hairs, these latter extending to the legs also; the head (incorrectly described as subrostrate) is much prolonged behind the eyes; the elytra are so densely punctate as to appear dull and scabrous, the numerous setigerous impressions giving a speckled appearance to the surface. *Anthocomus sericans*, Er. (1840), is an *Attalus*, and the specific name used by Gorham is therefore preoccupied.

5. *Attalus nigritulus.*

Attalus nigritulus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 120.

Moderately elongate, narrow (♂), broader and more widened posteriorly in ♀, shining; black, the elytra usually with a faint brassy or greenish lustre, the basal joints of the antennae externally, and the two basal joints of the anterior tarsi in ♂, testaceous, the legs piceous; sparsely pubescent, the elytra with intermixed, erect, longer hairs, similar to those on the exposed portion of the abdomen. Head reflexed in repose, considerably produced behind the eyes, broader in ♂ than in ♀, polished, very sparsely, obsoletely punctate, the inter-ocular portion flattened or depressed; eyes large. Prothorax narrower than the elytra, not much broader than long, convex, polished, almost smooth. Elytra moderately long, much wider than the prothorax, rugulose, closely, finely punctate. Legs long and slender; posterior tibiae bowed in both sexes.

♂. Antennae elongate, distinctly serrate; anterior tarsi with the prolonged upper portion of joint 2 reaching the apex of 3.

♀. Antennae more slender, much shorter, the outer joints a little longer than broad, 11 more elongate.

Length 2–2½ mm. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*, *Höge*), Jalapa, San Juan Bautista (*Höge*), Teapa (*H. H. Smith*).

Not uncommon in Mexico. Gorham's description was made from dirty female examples. The male is very like a *Dasytes*. In one specimen of this sex the apices of the elytra are compressed and subacuminate, but this is partly due to shrinkage after death. The elytra vary a little in length, and the head in one of the females named by Gorham is much elongated, as seen detached from the prothorax. The longer head separates *A. nigritulus* from various allied forms.

6. *Attalus malachioides*, n. sp.

♂. Elongate, narrow, shining; aeneous, the mouth-parts, the anterior margin of the head to between the eyes on each side, a small spot on the epistoma, the hind angles of the prothorax narrowly, the coxae, trochanters, and legs (a streak along the upper edge of the femora and the apices of the tibiae and tarsi excepted), and sometimes the outer limb and apex of the elytra also, testaceous or flavous; finely pubescent, with intermixed longer bristly hairs. Head considerably elongated behind the eyes, including the latter as wide as the prothorax, polished, excessively minutely punctulate, bifoveate in front, the eyes large; antennae long, feebly serrate, joints 3 and 4 subequal in length, 5–11 more elongate. Prothorax slightly broader than long, moderately rounded at the sides, polished, obsoletely punctulate. Elytra long, subparallel, a little wider than the prothorax; densely, very minutely punctate. Posterior tibiae bowed.

Anterior tarsi with the prolonged upper portion of joint 2 reaching the apex of 3.

Length 2⅓ mm.

Hab. Mexico, Cordova (*Höge*).

Two males, one of which has the outer limb and apex of the elytra flavous. The insect is not very closely allied to any of the other species enumerated in the present paper. It has the head basally elongated and the elytra subparallel much as in the same sex of *A. nigritulus*, Gorh. The metallic aeneous colour, the polished head, with sharply defined flavous anterior margin, the rather long, polished prothorax, the very densely sculptured elytra, and the pallid legs are characteristic.

7. *Attalus plagiatus.*

Anthocomus plagiatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 115.

♂. Anterior tarsi with joints 1 and 2 testaceous, 2 prolonged above into a stout lobe which reaches the apex of 3.

Hab. Guatemala, Calderas, on the slope of the Volcan de Fuego.

Gorham described the female only of this species, although he had specimens of both sexes before him. *A. plagiatus* has the facies of a *Malachius*, owing to its long, opaque elytra, which are subparallel in the male. The head is

black to the anterior margin in both sexes, but the sides of the front are testaceous. The discoidal black patch on the prothorax is sometimes so extended as to leave only the hind angles narrowly bordered with testaceous. The upper surface and tibiae are set with very long bristly hairs.

8. *Attalus opacipennis*, n. sp.

♀. Elongate, opaque, the head shining; black, the labrum and mandibles, the base of the palpi, the two basal joints of the antennae externally, the margins of the prothorax posteriorly, the anterior coxae, trochanters, and femora, the intermediate coxae, and the lower edge of the intermediate femora, testaceous; clothed with fine cinereous pubescence intermixed with long, erect, dark, bristly hairs. Head broader than long, minutely punctulate, shallowly bifoveate in front; antennae long, slender. Prothorax a little broader than long, about as wide as the head with the eyes; densely alutaceous and minutely punctate. Elytra long, subparallel, a little wider than the prothorax; densely alutaceous. Legs elongate, slender.

Length nearly 3 mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

One female. Near the Guatemalan *A. plagiatus* (Gorh.), but much smaller, the prothorax densely alutaceous and opaque, the head only shining.

9. *Attalus byssinus.*

Anthocomus byssinus, Er., Entomographien, p. 109; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 115.

Hab. Mexico (*Mus. Berol.*).

Gorham was unable to identify *A. byssinus* amongst the Mexican material he had for examination. He placed it provisionally near *A. plagiatus*, but it has no relationship with that insect, coming near the species here described under the name *A. crux-nigra*. A co-type (♀) of Erichson is now before me. It has the head black, densely punctulate, and broadly excavate in front; the antennae long, comparatively stout, the two basal joints testaceo-maculate; the prothorax rather broadly and abruptly testaceous at the base, for the rest black; the elytra moderately long, subparallel, wider than the prothorax, not nearly covering the abdomen, shining, violaceous (a narrow testaceous

space at the sides below the base excepted), densely punctulate; the femora obscure testaceous at the base; the upper surface closely cinereo-pubescent, the elytra also thickly set with intermixed erect, black, bristly hairs.

10. *Attalus aeneopicipennis.*

Anthocomus aeneopicipennis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 117.

♂. Antennae long, feebly serrate, joints 1–4 testaceous, the others slightly infuscate; anterior tarsi with the prolonged upper portion of joint 2 reaching the apex of 3; legs very elongate.

♀. Antennae much shorter, joints 5–11 black; elytra more widened towards the apex; legs more slender and less elongate.

Hab. Mexico, Jalapa.

There is a pair of this species in the "Biologia" collection. Easily recognisable by its pallid head, prothorax, and under surface and the golden-green elytra, the upper surface shining, the basal portion of the femora to a greater or less extent testaceous and the rest of the legs infuscate or black. The specimen marked "type," a ♂, was in very dirty condition. The antennae differ greatly in length and colour in the two sexes.

11. *Attalus hepburnius.*

Anthocomus hepburnius, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 317.

Hab. Mexico, Chihuahua.

The unique type of this insect is a female, and, as the author states, it is recognisable by the tuberculiform prominence on the epistoma. The head is blackish, the elytra nigro-cyaneous, and the prothorax rufous, with an oblong black streak on the disc in front. The surface is rather dull, the puncturing excessively minute and close. *A. hepburnius* is perhaps related to *A. mexicanus*, but as the male of the former is unknown the species can be left here for the present.

12. *Attalus crux-nigra*, n. sp.

Anthocomus discimacula, var.?, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 116.

♀. Rather elongate, the head and prothorax shining, the elytra duller; black, the basal joints of the antennae externally, the pro-

thorax with the anterior margin (except along the median third) and an angular patch on each side at the base (these markings connected laterally, leaving a large black cruciform patch), and the anterior femora (except along their upper edge), coxae, and trochanters, testaceous, the elytra nigro-caeruleous; finely pubescent and also set with intermixed longer, semi-erect hairs. Head short, broad, minutely punctulate, bi-impressed in front; antennae moderately long, feebly serrate, joints 3–11 much longer than broad. Prothorax convex, small, broader than long, polished, minutely punctulate. Elytra moderately long, much broader than the prothorax, widened posteriorly; rugulose and densely punctate. Legs slender; posterior tibiae curved.

Var.(?) The black markings on the prothorax reduced to a median vitta. ♀.

Length 2½ mm.

Hab. Mexico, Jalapa.

Gorham treated this insect as a variety of his *A. discimacula* (a species here transferred to the genus *Micromimetes*), from the female of which (a broken specimen from Guanajuato) it may be identified by its larger size, the much longer, simple antennae, the sharply-defined cruciform black patch on the prothorax, and the broader and more distinctly punctate elytra. *A. crux-nigra* comes near *A. hepburnius*, differing from that species in its smaller and more polished prothorax, flattened epistoma, etc. The broader head, the more transverse prothorax, the duller, less metallic elytra, etc., separate *A. crux-nigra* from *A. coelestinus*. The description of the present species is taken from a female from Jalapa, and there is another example of the same sex from Cordova (now without a head), also sent by Höge, which probably belongs to *A. crux-nigra*, differing from the other in having the black patch on the prothorax less extended in the middle posteriorly. The var.?, from the Sommer collection, in the Oxford Museum, from "Mexico," may also belong to the same species.

13. *Attalus forticornis*, n. sp. (Plate II, figs. 11, 11*a*, ♂.)

Moderately elongate, widened posteriorly, shining; black, the clypeus, the basal three or four joints of the antennae externally, the two basal joints of the anterior tarsi in ♂, the prothorax, a common transverse median fascia on the elytra (extending some distance up and down the suture, and along the outer margin to

beneath the humeri), the anterior coxae, the trochanters in part, the mesosternum and side-pieces and abdomen rufo-testaceous or testaceous, the rest of the elytra violaceous, the tarsi piceous; sparsely clothed with fine cinereous pubescence intermixed with numerous long erect hairs. Head transverse, minutely punctulate, the front broadly excavate in both sexes; antennae rather stout, very elongate and distinctly serrate in ♂ (reaching to the middle of the elytra when the head is extended), much shorter in ♀. Prothorax convex, a little broader than long, rounded at the apex, very sparsely and minutely punctulate. Elytra oblong, widened posteriorly, broader than the prothorax at the base; closely, minutely punctate. Legs comparatively long and stout.

♂. Anterior tarsi (fig. 11*a*) with the elongate upper portion of joint 2 reaching the apex of 3, rather narrow, and curved inwards towards the tip, joint 3 (seen from the side) longer than 1.

Length 4¼–5 mm. (♂ ♀.)

Hab. Mexico, Hacienda de la Imagen and Acaguizotla in Guerrero, 3,500–4,000 feet (*H. H. Smith*).

Two males and one female of this remarkable Malachiid were captured by Mr. Smith. The very elongate, comparatively stout antennae of the male is suggestive of the Galerucid-genus *Diabrotica*, while the female might be passed over for a *Collops* near *C. 4-maculatus*. The apical joint of the maxillary palpi is slender, and acuminate at the tip.

14. *Attalus maculosus.*

Anthocomus maculosus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 115, t. 7, fig. 1 (♂).

♂. Anterior tarsi with joints 1 and 2 testaceous, the prolonged upper portion of joint 2 stout, reaching the apex of 3; anterior and intermediate femora (except along their upper edge), the base of the posterior femora, and the coxae and trochanters, testaceous.

♀. Legs black.

Hab. Guatemala, San Gerónimo and Chiacam in Vera Paz.

The male of this species has the head and prothorax, a triangular black patch on each side of the latter towards the apex excepted, rufo-testaceous, these portions (the basal edge of the prothorax excepted) being black in the female. The elytra have each a large patch at the base and another towards the apex black. In both sexes the

head is nigro-setose behind the eyes. The colour of the head and prothorax is probably variable, as in some of the allied forms. The sexual characters were in part described by Gorham.

15. *Attalus sexguttatus*, n. sp. (Plate II, fig. 12, ♀.)

♀. Moderately elongate, widened posteriorly, shining, the elytra subopaque; rufo-testaceous, the prothorax with a spot on each side of the disc, and the elytra with a humeral patch and a subtriangular mark on the outer part of the disc beyond the middle, black, the terminal joint of the maxillary palpi, the antennal joints 4–11, the tibiae (except at the base) and tarsi, and the upper edges of the femora, infuscate or black; finely pubescent, and also set with scattered, long, pallid, semi-erect, bristly hairs. Head transverse, closely, very minutely punctate, the eyes prominent; antennae rather slender, comparatively short. Prothorax small, transverse, closely, very minutely punctate. Elytra moderately long, broader than the prothorax, much widened posteriorly, flattened on the disc anteriorly, the humeri tumid; rugulose, and densely, very minutely punctate. Legs long and slender.

Length 3 mm.

Hab. Panama, Tolé (*Champion*).

One example, found in January, 1883. This species approaches one of the forms of the variable of *A. rufipennis* (Gorh.), except that the elytra have an additional subapical spot; the puncturing, however, of the whole of the upper surface is finer and denser, the prothorax is smaller, and the eyes are more prominent. *A. maculosus* has a much larger head and prothorax, etc.

16. *Attalus pusillus.*

Anthocomus pusillus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 116, t. 6, fig. 24.

The two specimens from Cordova referred to this species by Gorham are females. The one treated as a variety (immature) is more shining than the selected type, and has the basal half of the head black, the black markings on the elytra more extended (those at the base forming a common fascia), and the puncturing of the elytral surface sparser. There is no difference in size, both measuring about 2½ mm. in length.

17. *Attalus teapanus*, n. sp.

Moderately elongate, narrow, shining; black, the labrum and clypeus, the anterior margin of the head and a minute spot between the eyes, the bases of the mandibles and palpi, the prothorax (an incomplete median vitta and an indeterminate patch on each side of it anteriorly excepted), and the ventral surface in part, rufo-testaceous, the elytra violaceous, with the outer margin from about the middle and the apex flavo-testaceous; sparsely pubescent without intermixed longer hairs. Head short, minutely punctate, the eyes large; antennae moderately long, rather stout, serrate. Prothorax ample, strongly transverse, convex, minutely punctulate. Elytra subparallel, comparatively short, not covering the long abdomen, very little wider than the prothorax; rugulose, and closely finely punctate.

♂. Anterior tarsi with the prolonged upper portion of joint 2 nearly reaching the apex of 3; elytra compressed and acuminate at the apex.

Length (excl. abdom.) 2 mm. (♂.)

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

One male. This species agrees with *A. tabogensis*, Gorh., in having the abdomen extending far beyond the elytra, but differs totally in colour, and in the longer and stouter antennae, etc. The apices of the elytra of the male are formed very much as in the same sex of the two species here referred to *Anthocomus*, but it is possible that this is in part due to shrinkage after death. The last dorsal segment of the abdomen is unimpressed.

18. *Attalus rufipennis.*

Anthocomus basalis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 116 (part.) (*nec* Erichson; *nec* Leconte).
Anthocomus rufipennis, Gorh., loc. cit. t. 6, fig. 25.

♂. Anterior tarsi with joints 1 and 2 testaceous, the prolonged upper portion of 2 stout and reaching the apex of 3.

♀. Posterior tibiae simple.

Hab. Mexico, Vera Cruz and Tabasco; Guatemala, generally distributed, and apparently common in Baja Vera Paz (San Gerónimo).

The insect figured by Gorham under the name *A. rufipennis*, and identified by him as *A. basalis*, Er., in the text, is not the *A. basalis* of Erichson, which has the elytra

plicate and sharply carinate laterally, there being no trace of plica or carina in *A. rufipennis*. His var. *β* (red, with black shoulder-spot) of *A. rufipennis*, three females of which are before me, is from Vera Cruz. The other forms were all obtained at San Gerónimo. The examples quoted by him from Zapote, Mirandilla, and Chontales belong to other species. A co-type (♂) of Erichson's *A. basalis* has been examined by me.*

19. *Attalus nigricornis*, n. sp.

Anthocomus basalis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 116 (part.).

Moderately elongate, widened posteriorly, shining; black, the head with the anterior half in ♂, or wholly in ♀, the prothorax (an oblong streak on the disc excepted in ♂), the basal joints of the antennae externally, the anterior coxae and trochanters, and the anterior femora in part and the abdomen in ♀, rufo-testaceous; the elytra with a common broad basal fascia (extending down the suture to the middle in ♂) violaceous and for the rest testaceous; finely pubescent. Head transverse, broad, minutely punctate; antennae rather short in both sexes. Prothorax transverse, convex, minutely punctate. Elytra rather short, very little wider than the prothorax at the base, widened posteriorly, closely, finely punctate.

♂. Anterior tarsi with the prolonged upper portion of joint 2 nearly reaching the apex of 3.

♀. Posterior tibiae strongly curved.

Length 2–2½ mm. (♂ ♀.)

Hab. British Honduras, Belize (*Blancaneaux:* ♂); Guatemala, Zapote (*Champion:* ♀).

Two specimens, the female much larger than the male, and with the head and prothorax wholly rufo-testaceous. More shining than *A. rufipennis*, the basal fascia of the elytra violaceous (instead of black), the prothorax relatively broader (at least in ♀), the puncturing of the elytra less dense and not so fine. The colour is doubtless equally variable. The metallic base of the elytra and the simply curved posterior tibiae of the female separate *A. nigricornis* from *A. varicus*.

* The N.-American *A. basalis*, Lec., requires a new name: *lecontei* is here substituted for it.

20. *Attalus scabripennis*, n. sp.

Anthocomus, n. sp., Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 318.

♀. Moderately elongate, the head and prothorax shining, the elytra opaque; black, the sides of the head before the eyes, the basal joints of the antennae externally, the base of the prothorax rather broadly, the mesosternum, and trochanters rufo-testaceous; the elytra fusco-violaceous, with a sutural stripe—starting from a little below the base, widened anteriorly, and at the apex dilated into a broad patch,—and the outer limb narrowly, testaceous; finely cinereo-pubescent. Head transverse, closely, very minutely punctulate, the eyes not very prominent; antennae short, joints 7–10 transverse. Prothorax convex, broader than long, much rounded at the sides, closely, very minutely punctulate. Elytra broader than the prothorax, much widened posteriorly, rugulose and densely, very finely punctate. Legs comparatively short and rather stout. Length $2\frac{3}{4}$ mm.

Hab. Guatemala, Tocoy in Baja Vera Paz (*Champion*).

One specimen, found in November, 1879. Recognisable by the opaque, very densely punctate, peculiarly marked elytra, the broadly rufescent base of the prothorax, the short antennae, and the rather stout legs. Gorham compares this insect with *Attalus verberatus*, from Panama, which has somewhat similarly coloured elytra, at least in the form (♂) selected by him as the type.

21. *Attalus verberatus*.

Attalus verberatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 318.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, about reaching the apex of 3.

Hab. Panama, Peña Blanca.

Gorham described the two sexes of this species. The elytra are somewhat variable in colour, the narrow antemedian fascia being reduced to a small lateral patch in the male. The antennae are rather elongate in both sexes.

22. *Attalus albomarginatus*, n. sp.

Rather short, shining; black, the four basal joints of the antennae, the front of the head (the pallid space extending angularly upwards

in the middle behind), the prothorax (a lanciform mark on the disc excepted), the apical portion of the abdomen, the apices of the femora, the tibiae, and the tarsi to near the tip, testaceous or pale testaceous; the elytra fusco-violaceous, with the outer margin, apex, and the suture from a little below the base, whitish; finely pubescent. Head large, broad, densely, minutely punctate, shallowly foveate between the eyes; antennae long, feebly serrate. Prothorax transverse, closely, minutely punctate. Elytra comparatively short, wider than the prothorax; densely, finely, distinctly punctate.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, about reaching the apex of 3.

Length 2 mm. (♂.)

Hab. Mexico (*Truqui, in Mus. Brit.*).

One male. In this minute species the elytra are fusco-violaceous, with the suture (to near the base), outer margin, and apex whitish, the dorsal stripe being slightly sinuate externally; the femora are black, with the apices abruptly testaceous and coloured like the tibiae; and the antennae are rather elongate. The elytra are somewhat distorted in drying, but the sculpture and markings are clearly visible.

23. *Attalus albolimbatus*, n. n.

Attalus limbatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 119 (*nec* Fabricius).

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, nearly reaching the apex of 3.

Hab. Guatemala.

The type of this species is a female; the fragmentary remains of the second specimen mentioned by Gorham include the anterior tarsi, sufficient to indicate the male sex. *A. albolimbatus* is a small, narrow form, with the anterior half of the head, the margins of the prothorax completely, and the sutural, outer, and apical margins of the elytra, whitish or pale testaceous, the rest of the head and prothorax being black and that of the elytra aeneo-piceous; the body beneath and the legs (the tarsi and apices of the tibiae excepted) are testaceous; and the elytra and the tip of the abdomen are strongly nigro-setose. The last-mentioned character separates the present species from the northern *A. cinctus*, Lec. The specific name *limbatus* is preoccupied and a new one is therefore required.

24. *Attalus cinctus.*

Anthocomus cinctus, Lec., Proc. Ac. Phil. 1852, p. 166.
Attalus cinctus, Horn, Trans. Am. Ent. Soc. iv, p. 126, and Proc. Calif. Acad. Sci. (2) iv, p. 329; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 318.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, reaching the apex of 3.

Hab. Southern United States; Lower California; N. Mexico, Sonora.

This small species has the basal margin of the prothorax, and the sutural, apical, and lateral margins of the elytra (the sutural margin more broadly so towards the middle), flavo-testaceous, the front of the head in the male similarly coloured in the middle and at the sides, and the rest of the upper surface black. The head is very broad in the male, a little narrower in the female. The pubescence is fine.

25. *Attalus viridivittatus*, n. sp. (Plate II, fig. 13, ♂.)

Moderately elongate, shining; black, the front of the head (the pallid coloration extending triangularly upwards in the middle to between the eyes), the basal joints of the antennae, the prothorax (an elongate triangular patch on the anterior portion of the disc excepted), and legs (the base of the anterior femora excepted) rufo-testaceous; the elytra each with a very broad, mesially constricted, green stripe extending down the disc to near the apex, these markings coalescent at the base, the suture, outer margins and apex rufo-testaceous; sparsely pubescent, and also set with intermixed long semi-erect hairs. Head short, broad, closely, minutely punctate, foveate between the eyes, and feebly bi-impressed in front; antennae long, serrate, joints 4–10 longer than broad, 11 elongate. Prothorax ample, broader than long, closely, minutely punctate. Elytra broader than the prothorax, widened posteriorly; rugulose, closely, finely punctate.

♂. Anterior tarsi with the prolonged upper portion of joint 2 about reaching the apex of 3.

Length $1\frac{9}{16}$ mm. (♂.)

Hab. Mexico, Chilpancingo in Guerrero, 4,600 ft. (*H. H. Smith*).

One male only of this handsome little insect was captured. It approaches *A. cinctus*, Lec., and bears a considerable

resemblance to the Palaearctic *Colotes trinotatus*, Er. The N.-American *A. rufiventris*, Horn, again, is not unlike the present species, except that it is very much larger.

26. *Attalus tabogensis*.

Attalus tabogensis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 319.

♂. Anterior tarsi with the prolonged upper portion of joint 2 about reaching the apex of 3; last dorsal segment of the abdomen with a very deep fovea extending down the apical half.

♀. Last dorsal segment arcuate-emarginate in the middle at the tip.

Hab. Panama, Taboga Island.

This species is allied to *A. albolimbatus* (= *limbatus*, Gorh.), differing from it in the shorter, opaque elytra (leaving two or three segments of the abdomen exposed), the non-metallic dorsal vitta of the latter, and the peculiar ♂-characters. The elytra and the exposed dorsal surface of the abdomen are conspicuously nigro-setose. The colour of the head and prothorax is variable. The antennae are short in both sexes. A female from the same locality, evidently belonging to *A. tabogensis*, has the prothoracic margins only pale, and the elytra more elongate, with the dorsal stripe (which is narrowed or evanescent anteriorly in the types) broad throughout, and extending inward to the suture at the base.

27. *Attalus scutellaris*.

Attalus scutellaris, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 119.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, reaching the apex of 3.

Hab. Mexico; Guatemala.

Represented in the "Biologia" collection by a pair from Guatemala and a female from Mexico. Very like *A. anthobioides*, but with a large, aeneo-piceous, elongate-triangular, common scutellar patch reaching to beyond the middle of the elytra; the prothorax less transverse, and with the dark portion brassy (the anterior margin testaceous in ♂); the elytra more shining, and densely, minutely punctate. *A. scutellaris* is related to the N.-American *A. scincetus*, Lec.

28. *Attalus anthobioides.*

Attalus anthobioides, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 119.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, reaching the apex of 3; antennal joints 4–10 about as broad as long.

Hab. Guatemala.

A small form, with the front of the head broadly, the antennae, the margins of the prothorax, the elytra, and legs testaceous; the head and prothorax transverse, shining; the elytra dull, feebly punctate; the upper surface set with bristly, dark, scattered hairs; the antennae short. Four females and two males seen.

29. *Attalus subfasciatus.*

Attalus subfasciatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 320, t. 13. fig. 2 (*nec* Fall, 1897 *).

Hab. Mexico, Northern Sonora.

The five specimens seen of this species are all of the female sex. A small, rather convex, very shining form; nigro-piceous in colour, with the basal margin of the prothorax, and a common, interrupted, outwardly-dilated, ante-median fascia on the elytra, testaceous; the femora and posterior tibiae more or less infuscate and the rest of the legs testaceous; the pubescence (? abraded) only just traceable.

30. *Attalus megalops*, n. sp.

Moderately elongate, narrow, shining; black, the mouth-parts, the reflexed basal and outer margins of the prothorax, a large triangular patch on the outer half of the elytra before the middle, and the apex of the latter, the under surface of the head and prothorax, the abdomen in part, and the trochanters and legs, testaceous, the antennae infuscate, with joints 1–5 more or less testaceous; sparsely, finely pubescent, with intermixed longer hairs. Head short, including the very large eyes broader than the prothorax, sparsely, minutely punctulate; antennae slender, moderately long. Prothorax large, transverse, convex, minutely punctulate. Elytra rather elongate, scarcely broader than the

* The name *falli* is here substituted for the Californian *A. subfasciatus*, Fall (Canad. Entom. xxix, p. 243).

prothorax at the base, widened towards the apex; closely, very finely punctate.

♂. Anterior tarsi with the prolonged upper portion of joint 2 rather stout, reaching the apex of 3.

Length $2\frac{1}{5}$ mm. (♂.)

Hab. Panama, San Lorenzo (*Champion*).

One male (somewhat immature), captured in January, 1883. Recognisable by its very broad, short head, large, prominent eyes, ample prothorax, interruptedly flavo-fasciate elytra (the triangular lateral patch extending inwards to near the suture), and shining surface. *A. megalops* has the elytra marked much as in *A. subfasciatus*, Gorh., from Sonora, differing from that insect in its less convex form, broad head and prothorax, more elongate elytra, longer limbs, etc.

31. *Attalus debilicornis*, n. sp.

Comparatively short, widened posteriorly, shining, the elytra somewhat opalescent; nigro-piceous, the mouth-parts, antennae, front of the head (the pallid coloration limited behind by the anteriorly bidentate dark portion), the basal margin of the prothorax, a common, post-basal, transverse fascia on the elytra (extending forwards at the sides to beneath the humeri), the apices of the latter, and the trochanters and legs, pale testaceous; sparsely pubescent, and also set with a few dark bristly hairs. Head short, broad, polished, very minutely punctulate, shallowly bifoveate; antennae short, slender, joints 4–10 about as broad as long. Prothorax strongly transverse, minutely punctulate. Elytra very little wider than the prothorax at the base, much widened posteriorly, minutely punctate.

♂. Anterior tarsi with the prolonged upper portion of joint 2 stout, nearly reaching the apex of 3.

Length $1\frac{1}{2}$ mm. (♂.)

Hab. Guatemala, Capetillo (*Champion*).

One male. Closely related to *A. anthobioides*, Gorh., differing from it in the bifasciate elytra, and the shorter, more feebly developed antennae.

32. *Attalus sapphirinus*.

Anthocomus sapphirinus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 117.

Hab. Mexico.

The six examples seen of this species are all females. It may be known by its shining head and prothorax, and rather dull, opalescent, obsoletely punctate, purplish elytra. The head has at least the anterior half testaceous, the black portion being sometimes reduced to a transverse space on the vertex; the prothorax is small and transverse, in some specimens almost wholly black, in others red; the elytra are much widened posteriorly; the pubescence is sparse, and the elytra, as usual, are set with longer, intermixed, semierect hairs; the posterior tibiae (♀) are strongly curved, and the posterior femora are infuscate.

33. *Attalus glaucus*, n. sp.

♀. Moderately elongate, rather narrow, shining, the elytra subopaque; testaceous, the prothorax with a broad median vitta (nearly reaching the base), and the under surface in part (that of the prothorax excepted), black; the elytra with the outer limb to beyond the middle, and the apices narrowly, flavo-testaceous, for the rest dark purplish-brown, appearing opalescent or glaucous in certain lights; the middle and hind tarsi and the apices of the antennae more or less infuscate; finely pubescent, with intermixed longer, semierect hairs. Head broad, short, closely, minutely punctulate; antennae short. Prothorax very convex, ample, transverse, closely, minutely punctulate. Elytra moderately long a little widened posteriorly, very little broader than the prothorax at the base, densely, minutely punctulate. Legs long and rather slender.

Length $2\frac{1}{16}$ mm.

Hab. GUATEMALA, Yzabal (*Sallé*).

One female. Near *A. opalinus*, Gorh., from Chiriqui, differing from that insect in its broader head, more ample, nigro-vittate prothorax, and duller elytra, the apices of which are yellow. The present species is not unlike the European *A. amictus*, Er.

34. *Attalus opalinus.*

Anthocomus opalinus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 317.

Hab. PANAMA, Volcan de Chiriqui.

The type of this species also is a female. It is very like the Mexican *A. sapphirinus*, but is readily separable by the more elongate elytra; the sides of the latter, and the base

of the prothorax, are sharply margined with pale testaceous; and the legs are more elongate, the posterior tibiae much straighter.

35. *Attalus laeviusculus*, n. sp.

♂. Rather short, shining; black, the basal five joints of the antennae, the bases of the tibiae and tarsi, and the anterior femora, more or less testaceous; finely, sparsely pubescent. Head short, broad, very sparsely, obsoletely punctate; antennae rather short, distinctly serrate, joints 6–10 about as broad as long. Prothorax convex, transverse, obsoletely punctate. Elytra a little wider than the prothorax at the base, dilated posteriorly, somewhat rugulose and obsoletely punctate. Anterior tarsi with the prolonged upper portion of joint 2 about reaching the apex of 3. Posterior tibiae bowed.

Length 2 mm.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*).

One male. Distinguishable amongst its allies by the shining, comparatively smooth, black upper surface, convex prothorax and partly dark legs. The antennae (♂) are much shorter than in the same sex of *A. nigroaeneus*, *A. nigritulus*, etc.

36. *Attalus sulcifrons*, n. sp.

♀. Narrow, moderately elongate, inflated posteriorly, very shining; black, with a faint brassy lustre, the labrum, and the basal joints of the antennae in part, obscure ferruginous, the legs wholly piceous; finely pubescent, with intermixed long, suberect hairs. Head short, broad, obsoletely punctulate, canaliculate on the vertex and feebly bifoveate in front, the eyes very prominent; antennae short, joints 6–10 transverse. Prothorax transverse, not very convex, feebly rounded at the sides, polished, obsoletely punctulate. Elytra wider than the prothorax, moderately long, rugulose, sparsely punctulate. Legs very slender; posterior femora strongly bowed.

Length $2\frac{1}{3}$ mm.

Hab. Mexico, Cordova (*Höge*).

One specimen. Extremely like *A. nigritulus*, Gorh. (♀), with which it was first confused by me, but separable from that species by the much shorter head (as seen detached from the prothorax), the canaliculate vertex, the shorter antennae, joints 6–10 of which are transverse,

the shorter prothorax, and the smoother elytra. The uniformly dark legs, the differently formed antennae, the sulcate vertex, the longer, subaeneous elytra, and the less convex prothorax distinguish *A. sulcifrons* from *A. laeviusculus*; and the dark legs, smoother surface, etc., from *A. nigroaeneus*, Gorh.

37. *Attalus atratus*, n. sp.

♀. Narrow, moderately elongate, slightly widened posteriorly, shining; black with a faint brassy lustre, the basal joints of the antennae obscure testaceous externally, the legs piceous; finely pubescent, with a few intermixed longer hairs. Head short, obsoletely punctulate, feebly bifoveate in front, the eyes (as seen from above) rather small and not prominent, the post-ocular space very short; antennae rather short, joints 4–10 slightly longer than broad. Prothorax transverse, convex, rounded at the sides, faintly punctulate. Elytra a little wider than the prothorax, moderately long, closely, distinctly punctate. Posterior tibiae feebly curved.

Length $2\frac{1}{8}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

Two females. This insect agrees with *A. sulcifrons* (♀) in colour, and in having a short head; but the eyes are less prominent, the prothorax is more convex, the elytra are less inflated posteriorly and closely, distinctly punctate, and the posterior tibiae are much straighter. The short head, smaller eyes, straighter hind tibiae, etc., distinguish *A. atratus* from *A. nigritulus* (♀).

38. *Attalus caraboides*.

Attalus caraboides, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 120.

♂. Anterior tarsi with the prolonged upper portion of joint 2 about reaching the apex of 3; anterior and intermediate trochanters each produced into a sharp tooth, the tooth on the intermediate pair long and curved, that of the posterior pair drawn out into a long spoon-shaped process.

Hab. Guatemala, Panajachel, on the Lake of Atitlan.

The five specimens seen are all males. A shining aeneous form, with the legs (the posterior femora and the apical joint of each tarsus excepted), the mouth-parts, and the antennae in great part or entirely, testaceous.

39. *Attalus nigroaeneus.*

Anthocomus nigroaeneus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 117.

♂. Antennae elongate, feebly serrate, joints 3–11 longer than broad; anterior tarsi with the prolonged upper portion of joint 2 slender, about reaching the apex of 3.

♀. Antennae much shorter, joints 4–10 about as broad as long; posterior tibiae slightly produced at the inner apical angle.

Hab. Guatemala.

A small, shining, nigro-aeneous form, thickly clothed with long erect hairs intermixed with the fine pubescence; the legs variable in colour, but with at least the posterior femora infuscate; the elytra much widened posteriorly in both sexes. The single male included in the series of five examples before me has the antennae very much more elongate than in the females.

40. *Attalus laevifrons*, n. sp.

♀. Comparatively short, much widened posteriorly, shining; nigro-aeneous, the elytra with a greenish lustre, the antennae fusco-testaceous, the clypeus, the points of insertion of the antennae, the legs (the tips of the tarsi excepted), and trochanters testaceous; finely pubescent and also set with long, erect, intermixed, bristly hairs. Head polished, sparsely, excessively minutely punctate, obsoletely foveate on the vertex, unimpressed in front; antennae very short, joints 8–10 subtransverse. Prothorax small, transverse, sparsely, excessively minutely punctate. Elytra comparatively short, broader than the prothorax, much widened posteriorly; closely, finely punctate. Legs slender; posterior tibiae slightly produced at the inner apical angle.

Length 2 mm.

Hab. Panama, Peña Blanca (*Champion*).

One female, found in January, 1883. Less elongate and more shining than *A. nigroaeneus*, the head smoother, the antennae (♀) very short, with the penultimate joints subtransverse, the elytra shorter, greenish, and closely, finely punctate, the legs testaceous.

41. *Attalus laticollis.*

Anthocomus laticollis, Er., Entomographien, p. 112; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 117.

Hab. Mexico (*Mus. Berol.*), "Temisco" [? in Puebla] (*Mus. Oxon.*).

In the Hope Museum at Oxford there is an *Attalus* apparently belonging to this species. It is a minute greenish insect, clothed with fine whitish pubescence, the elytra densely, minutely punctate, the prothorax as broad at the base as the elytra, the legs and antennae (the extreme base of the latter excepted) infuscate, and agrees thus far with Erichson's description.

42. *Attalus plumbeus*, n. sp.

♀. Elongate, depressed, much widened posteriorly, opaque; nigro-plumbeous, the sides of the head before the eyes, the anterior coxae, the posterior trochanters, and the abdomen with the sides, the basal segments down the middle, and the membranous portions, flavo-testaceous; the entire upper surface excessively finely scabroso-punctate, very finely cinereo-pubescent, the post-ocular portions of the head and the terminal abdominal segments also set with bristly hairs, the elytra with intermixed scattered longer hairs. Head rather small, narrower than the prothorax, the eyes large; antennae feebly serrate, moderately long, joints 3–11 much longer than broad. Prothorax large, very little broader than long, strongly rounded at the sides. Elytra broader than the prothorax, rapidly widened to the broadly rounded apices, not nearly covering the abdomen. Legs elongate, slender.

Length (excl. abdom.) 3¼ mm.

Hab. Mexico, Sayula in Jalisco (*Höge*).

One female. Amongst the Mexican forms this species is not unlike *A. opacipennis*, from which it may be recognised by its very opaque, uniformly plumbeous, sericeo-pubescent upper surface, and the posteriorly dilated elytra. The surface-sculpture is extremely fine. The last four abdominal segments are exposed, owing to the gravid condition of the insect, showing that very little reliance can be placed on this character. The following is a nearly allied form.

43. *Attalus olivaceus*, n. sp.

♀. Elongate, subparallel, opaque; greenish-olivaceous, the sides of the head before the eyes, and the basal joints of the antennae externally, testaceous, the tibiae and tarsi in part fusco-testaceous; the entire upper surface excessively finely scabroso-punctate, and clothed with fine, sericeous, ashy pubescence, the post-ocular portions

of the head set with bristly hairs. Head short, broad, about as wide as the prothorax, transversely depressed in front, the eyes rather large; antennae comparatively short, feebly serrate, joints 3–11 longer than broad. Prothorax transverse, rather convex, rounded at the sides, very little narrower at the apex than at the base. Elytra long, subparallel, slightly wider than the prothorax at the base. Legs elongate, slender.

Length 3½ mm.

Hab. Mexico (*ex coll. Sommer, in Mus. Oxon.*).

One female. More elongate than *A. plumbeus*, greenish-olivaceous in colour, the head about as wide as the prothorax and transversely excavate in front, the antennae shorter, the prothorax more convex, the elytra longer and subparallel. *A. olivaceus* is very like a *Dasytes*, and it might be mistaken for a species of that genus. The male, unfortunately, of both *A. plumbeus* and *A. olivaceus*, is unknown; but the insects unquestionably belong to the Malachiides, and they are probably correctly placed in *Attalus*.

44. *Attalus plicatus*, n. sp.

Moderately elongate, widened posteriorly, shining; rufo-testaceous, the elytra with a common basal fascia (excised along the suture behind) and a transverse subapical patch on the disc, a broad space across the metasternum beneath, the legs, the apical joint of the maxillary palpi, and joints 5–11 of the antennae, black, joints 1–4 of the latter obscure testaceous; finely pubescent, without intermixed longer hairs. Head broad, transverse, minutely punctate, obsoletely bifoveate in front; antennae long, stout, moderately serrate, joints 3–11 longer than broad. Prothorax ample, transverse, convex, very shining, sparsely, excessively minutely punctate. Elytra moderately long, at the base scarcely wider than the prothorax, much widened posteriorly, somewhat opalescent, transversely depressed below the base and distinctly plicate laterally from the humeral callus to about the middle; densely, conspicuously punctate.

♂. Anterior tarsi with the prolonged pallid upper portion of joint 2 reaching the apex of 3.

Length 3 mm. (♂.)

Hab. Mexico, Chilpancingo in Guerrero, 4,600 feet (*H. H. Smith*).

One male. Near *A. rufipennis*, differing from all the forms of that species in the laterally plicate, more coarsely

punctate, subapically maculate elytra, the larger and smoother prothorax, and the longer antennae. The duller, densely punctate, non-carinate, subapically maculate elytra separate *A. plicatus* from *A. basalis*, Er., and *A. carinatus*, Gorh. It is very probable that the present species varies in the colour of the head and prothorax. The apical joint of the maxillary palpi is rather stout, and obliquely truncate at the tip.

45. *Attalus carinatus.*

Attalus carinatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 320, t. 13, fig. 4.

♂. Anterior tarsi with the prolonged upper portion of joint 2 nearly reaching the apex of 3.

Hab. Panama, Chiriqui.

Extremely like the Colombian *A. basalis*, Er. (a co-type, ♂, of which has been communicated by Prof. H. J. Kolbe for comparison), but larger, the head and prothorax broader, smoother, and entirely rufous; the elytra with a similar very prominent submarginal carina, and a large black patch at the base, the puncturing a little coarser and closer; the maxillary palpi stouter. From similarly coloured *A. rufipennis* the present species may be known by its more shining surface, carinate, more strongly punctured elytra, and stouter palpi. The legs and antennae vary in colour. Ten specimens seen.

46. *Attalus viridimicans*, n. sp.

♀. Elongate, rather convex, much widened posteriorly; brilliant golden-green, the mouth-parts, palpi, anterior portion of the head, antennae (the infuscate six outer joints excepted), trochanters, and legs (the basal half of the posterior femora excepted), flavo-testaceous; sparsely, finely pubescent, without intermixed longer hairs. Head very short, broad, faintly punctulate, the clypeus very broad, longer than the labrum; antennae slender, joints 3–10 longer than broad, 11 elongate. Prothorax short, convex, strongly rounded at the sides, hollowed laterally at the base, faintly punctulate. Elytra of the same width as the prothorax at the base, at the apex nearly one-half broader, somewhat rugulose, and finely, distinctly punctate. Legs long, moderately slender, the posterior tibiae feebly curved.

Length $3\frac{1}{4}$ mm.

Hab. Mexico, Soledad in Guerrero, 5,500 feet (*H. H. Smith*).

One example. A comparatively large, rather convex, brilliant golden-green form, with the legs (the base of the posterior femora excepted), the basal joints of the antennae, and the front of the head pale testaceous. The pubescence is fine and sparse, and there are no long intermixed erect hairs such as are present in *A. aeneovirens* (Gorh.). The epistoma is broad and very short; the clypeus is strongly developed (longer than the labrum); and the maxillary palpi are stout, with the apical joint oblong-ovate and subacuminate.

47. *Attalus chalceus*, n. sp.

♀. Narrow, moderately elongate, rather convex, subopaque; aeneous, the antennae (the infuscate apical joints excepted), bases of the palpi, anterior trochanters, tibiae, and tarsi testaceous, the femora piceous; finely cinereo-pubescent. Head short, narrower (with the eyes) than the prothorax, densely, very minutely punctate; antennae short, joints 8–10 subtransverse. Prothorax strongly transverse, as wide as the base of the elytra; densely, excessively minutely punctate, somewhat shining on the middle of the disc. Elytra rather long, widened posteriorly, dull, alutaceous, and with scattered minute punctures. Legs slender.

Length $2\frac{1}{2}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

One specimen. A rather convex, narrow, brassy, subopaque form, with testaceous antennae (the apices excepted), tibiae, and tarsi. The type is abraded, but a short fine cinereous pubescence is still present along the sides of the prothorax and elytra. The clypeus is extremely short, not so long as the labrum. The maxillary palpi are stout, acuminate at the tip.

48. *Attalus aeneovirens*.

Ebaeus aeneovirens, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 121.

♂. Anterior tarsi with the prolonged upper portion of joint 2 about reaching the apex of 3.

Hab. Guatemala, Calderas on the slope of the Volcan de Fuego.

A short, convex, shining, brassy-green form, with the

elytra inflated posteriorly in both sexes and coarsely punctate; the legs testaceous, with the femora to near the apex, and the apices of the tibiae and tarsi, infuscate; the palpi stout; the surface set with long, fine, erect hairs, intermixed on the prothorax with short cinereous pubescence. In general shape *A. aeneovirens* is not unlike the European *A. cyaneus*, Ros. Gorham stated that he was unable to distinguish the sexes.

49. *Attalus flavomarginatus*, n. sp. (Plate II, fig. 14, ♀.)

Short, much widened posteriorly in both sexes, shining; aeneous, the labrum and mouth-parts, the antennae in great part or entirely, the head in ♂ from the anterior margin to between the eyes, and in ♀ at most with the anterior margin, the prothorax on all sides (leaving a large dark transverse discoidal patch), and the legs, flavous or testaceous; sparsely clothed with fine pallid pubescence, the hairs on the elytra long, uniform. Head very short, broad, sparsely punctulate, the clypeus as long as the labrum; antennae rather long in both sexes, slender, joints 3–11 longer than broad. Prothorax very broad, short; closely, minutely punctulate. Elytra short, wider than the prothorax, dilated, convex, and abruptly declivous posteriorly; closely, coarsely punctate. Legs slender.

♂. Anterior tarsi with the prolonged upper portion of joint 2 nearly reaching the apex of 3.

Length $2\frac{1}{6}$–$2\frac{2}{3}$ mm. (♂ ♀.)

Hab. Mexico, Chilpancingo and Omilteme in Guerrero, 4,600–8,000 feet (*H. H. Smith*).

Ten specimens, four of which are males. Near *A.* (*Ebaeus*) *aeneovirens*, Gorh., from the slope of the Guatemalan Volcan de Fuego; differing from it in the relatively broader, less convex, and sharply flavo-marginate prothorax, the more extended yellow portion of the head in the male (appearing as three large coalescent patches), the entirely pale legs, and the more uniform vestiture, *A. aeneovirens* having very long conspicuous bristly hairs intermixed with the short cinereous pubescence on the prothorax. The palpi are stout.

50. *Attalus varicus*, n. sp.

Anthocomus basalis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 116 (part.).

Moderately elongate, widened posteriorly, shining; varying in colour from black, with the elytra (a transverse patch at the base of each elytron excepted), the outer edge of the two basal joints of the antennae, and the legs and abdomen in great part testaceous to testaceous, with a humeral spot, the posterior legs in part, the antennae (except at the base), and the tips of the palpi black; finely, sparsely pubescent and also somewhat thickly set with long, suberect, pallid hairs. Head broad, transverse, closely, minutely punctate; antennae rather short in both sexes. Prothorax transverse, convex, minutely punctate. Elytra widened posteriorly, a little broader than the prothorax at the base, rather sparsely, minutely punctate. Legs slender; posterior tibiae curved in both sexes.

♂. Anterior tarsi apparently 4-jointed, the prolonged upper portion of the fused joints 1 and 2 about reaching the apex of 3; posterior tibiae slightly produced at the apex.

♀. Posterior tibiae produced at the apex into a long dentiform process, which reaches as far as the apex of the first tarsal joint.

Length 2–2½ mm. (♂ ♀.)

Hab. Guatemala, Mirandilla (*Champion*: ♀); Nicaragua, Chontales (*Janson*: ♂ ♀); Panama, Taboga Island (*Champion*: ♀).

Three females and one male. The pair from Chontales are taken as the types, the male differing from the female in having the head testaceous to near the base. The Guatemalan example (♀) has the sides of the prothorax broadly and a large humeral patch nigro-piceous; the Taboga specimen (♀) is testaceous, with a black humeral spot. *Anthocomus fuscescens* (= *calcaratus*) (Gorh.), has similar posterior tibiae in the female, but the male of that insect has simple 5-jointed anterior tarsi. In the unique male of the present species the basal joint of the anterior tarsi cannot be distinguished for certain, it being either extremely short or fused with the second.

51. *Attalus coelestinus.*

Attalus coelestinus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 320.

♂. Anterior tarsi with joints 1–3 somewhat thickened, 1 short, 3 as long as 2, 4 small, 2 rounded at the apex as seen in profile; antennae moderately long, serrate.

♀. Antennae shorter and more slender.

Hab. Mexico, Northern Sonora.

Described by Gorham from a single pair, one male and two females having subsequently been detected amongst Morrison's captures. This insect has the head and prothorax black, the latter with a rufo-testaceous patch on each side at the base, this colour in one example extending to the whole of the prothorax; the elytra shining, blue or bluish-green; the basal joints of the antennae externally, the anterior and middle trochanters, and the base of the anterior femora beneath in ♂, testaceous; the pubescence fine, and intermixed with long, semierect, bristly, dark hairs; the anterior tarsi in ♂ (said to be 4-jointed when viewed from above) distinctly 5-jointed, the three basal joints stouter than in the female, the second not lobed above. The last-mentioned tarsal character distinguishes *A. coelestinus* from all its allies, except *A. mexicanus*, and brings these two forms near *Tanaops*, Lec. In one of the two males seen the elytra appear to be compressed and subacuminate at the apex, but this is probably due to shrinkage after death, the specimen being immature.

52. *Attalus mexicanus.*

Attalus mexicanus, Pic, L'Echange, xxvi, p. 5 (Jan. 1910).

Moderately elongate, widened posteriorly, shining, the elytra duller; black, the basal joints of the antennae externally, the prothorax at the sides and base or entirely, and the anterior and intermediate legs in great part in both sexes testaceous, the elytra nigro-violaceous or greenish, sometimes with the disc indeterminately testaceous towards the apex, the posterior tibiae and tarsi piceous; finely cinereo-pubescent, and also set with scattered semierect bristly hairs. Head transverse, broad in ♂, narrower in ♀, closely, minutely punctulate, the front transversely depressed, the epistoma flattened; antennae moderately long, more distinctly serrate in ♂ than in ♀. Prothorax transverse, minutely punctulate. Elytra moderately long, more widened posteriorly in ♂ than in ♀, separately rounded at the apex, densely, minutely punctate. Legs elongate, rather slender; the basal joint of the anterior tarsi rather long in both sexes.

♂. Anterior tarsi with joints 1 and 2 oblique, a little shorter than those following, as seen in profile, 2 much shorter than 1 and not lobed above, 3 and 4 smaller and subequal.

Length $2\frac{4}{5}$–$3\frac{1}{2}$ mm. (♂ ♀.)

Hab. Mexico (*coll. Pic*; *Truqui*, *in Mus. Brit.*), "Temisco" [? Temascala in Puebla] (*Mus. Oxon.*).

The above diagnosis was drawn up, and the same specific name selected, before Pic's description of *A. mexicanus* had been seen by me. There can be little doubt, however, that his insect belongs to the same species, the type of *A. mexicanus* having the prothorax wholly rufo-testaceous, as in one of the females in the British Museum. The six examples examined (4 ♂, 2 ♀) vary in the development of the black discoidal patch on the prothorax, which in the female is small or entirely wanting, and the intermixed semierect hairs on the upper surface are often abraded. The male anterior tarsi are almost simple, the oblique basal joints being very slightly modified. *A. coelestinus*, Gorh., has similar anterior feet in the male, except that the third joint is larger and the first shorter. *A. mexicanus* would be almost as well placed in *Anthocomus*; the latter, however, has the front tarsi similarly formed in the two sexes.

Micromimetes.

Micromimetes, Wollaston, Journ. Ent. i, p. 439 (1862).

Anthocomus discimacula, Gorh., from Mexico, has the anterior tarsi and maxillary palpi formed in the male sex exactly as in *Micromimetes*, Woll., based on two small species from the Canary Is., and it can quite well be included in that genus. The simple 4-jointed front feet of the male also brings it near *Colotes*, Er., under which Wollaston's genus is sunk by Abeille de Perrin; but the apical joint of the maxillary palpi is oblong-ovate and narrowed towards the tip, as in both sexes of *Attalus*.

1. *Micromimetes discimacula*. (Plate II, figs. 15, 15*a*, antenna, 15*b*, front tarsus, ♂.)

Anthocomus discimacula, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 116 (excl. var.).

♂. Antennae testaceous, maculated with black (joints 1, 6, and 8 conspicuously black above), very feebly serrate, joints 2 and 3 subequal, 4 and 5 shorter, 6 and 8 a little stouter than 7, 9 and 10 elongate, widened outwards, 11 oblong-ovate, much longer than 10; anterior legs (the base of the tibiae excepted), intermediate trochanters, and intermediate femora to near the tip, testaceous.

♀. Antennae (joints 2–7 excepted) and legs in great part black;

the antennae more slender, joints 3–8 subequal in length (9–11 missing), 6 distinctly broader than 5 or 7, elytra more widened towards the apex.

Hab. Mexico, Guanajuato.

The male of this insect, described by the author, loc. cit. p. 117, was labelled by him as the type, the diagnosis apparently having been taken from the female. The former is readily recognisable by its simple 4-jointed anterior tarsi, and the peculiarly formed, maculate antennae. The only female reserved for the "Biologia" collection unfortunately wants the anterior legs and part of the antennae. The var. ?, as Gorham supposed, belongs to a different species, *Attalus crux-nigra*. The antennal joints 1–8 of the male of *M. discimacula* might almost be described as moniliform, if viewed in a certain light.

Pseudattalus, n. gen.

Antennae 9-jointed (fig. 16*a*); apical joint of the maxillary palpi narrow, oblong-ovate, subacuminate; elytra short, convex, much widened posteriorly in both sexes, without appendages in ♂; tarsi 5-jointed, the upper portion of the second joint of the anterior pair produced over the third in ♂; the other characters as in *Attalus*.

Type, *Anthocomus minimus*, Er.

Pseudattalus includes *Anthocomus minimus*, Er., and *A. seminulum*, Er. (both of which were placed under *Ebaeus* by Gorham), and *Ebaeus punctatus*, Gorh., minute forms approaching *Ebaeus* and *Hypebaeus*; *E. aeneovirens*, Gorh., has 11-jointed antennae, and it is here included under *Attalus*. *A. minimus* is selected as the type of the present genus, as both sexes of it are contained in the material under examination, the other species being represented by females only. The 9-jointed antennae is a unique character in the group, while the tarsal structure of the male is similar to that of *Attalus*. The species are nigro-violaceous, cyaneous, or black, shining, and sparsely pubescent. In the females the elytra do not nearly cover the abdomen. A peculiar sexual character is to be found in the armature of the intermediate tibiae of the male of *P. minimus*, and in that of the posterior tibiae of the female of *P. armatus*. Prof. H. J. Kolbe has kindly communicated a co-type of Erichson's species for examination.

1. *Pseudattalus minimus.* (Plate II, figs. 16, 16*a*, *b*, ♂.)

Anthocomus minimus, Er., Entomographien, p. 113.
Ebaeus minimus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 121 (part.).

Very shining, nigro-violaceous, the mouth-parts, antennae, and legs testaceous, the apices of the antennae and the bases of the femora sometimes more or less infuscate; the entire upper surface sparsely, minutely punctulate, sparsely pubescent. Head broad, short, the eyes large and prominent, a little smaller in ♀; antennae long and with joints 4–9 elongate in ♂, shorter in ♀. Prothorax transverse, convex, about as wide as the head with the eyes. Elytra short, inflated posteriorly, subalutaceous. Legs slender; intermediate and posterior tibiae with two or more minute short pallid setae at the apex, the posterior pair bowed in both sexes.

♂. Anterior tarsi with the prolonged upper portion of joint 2 extending over the base of 3; intermediate tibiae (fig. 16*b*), with a matted, spiniform, tuft of long blackish setae at the inner apical angle reaching about as far as the apex of the first tarsal joint.

Length 1⅓–1½ mm. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui, Tolé (*Champion*); Colombia.

A co-type (♂) of *A. minimus* is before me, but I am unable to examine its intermediate tibiae, owing to the way the insect is mounted. Five males and three females from Chiriqui are contained in the "Biologia" collection, and the description is therefore taken from them. There can be no doubt, however, that these examples belong to the same species.

2. *Pseudattalus armatus*, n. sp. (Plate II, fig. 17, ♀, posterior tibia.)

Ebaeus seminulum, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 121 (*nec* Erichson).
Ebaeus minimus, Gorh., loc. cit. (part.).

♀. Shining, black, the elytra sometimes with a faint bluish lustre, the antennae and legs testaceous, the outer joints of the former, the femora to near the tip, and the posterior tibiae in part, infuscate; sparsely cinereo-pubescent. Head short, broad, sparsely, obsoletely punctate, bi-impressed in front, the eyes moderately prominent; antennae short. Prothorax convex, transverse, very sparsely, obsoletely punctate. Elytra short, inflated posteriorly, subalutaceous, somewhat closely punctulate. Legs slender;

posterior tibiae (fig. 17) strongly bowed, produced at the apex into a long slender spine which about reaches the apex of the first tarsal joint.

Length $1\frac{1}{2}$–$1\frac{2}{3}$ mm.

Hab. Guatemala, near the city, Pantaleon, Paso Antonio, San Gerónimo (*Champion*).

Ten specimens, all of the female sex. Less shining than *P. minimus*, the elytra somewhat closely punctulate, the pubescence more conspicuous, the posterior tibiae (♀) produced into a long spiniform process, as in the same sex of *Attalus fuscescens* (= *calcaratus*), Gorh. (an insect here referred to *Anthocomus*) and *A. varicus*. Erichson's type (♀) of *A. seminulum*, from Caracas, has more distinctly punctate elytra, the tibiae (the extreme apex of the posterior pair excepted) and tarsi testaceous, and the posterior tibiae of the female unarmed.

3. *Pseudattalus punctatus*.

Ebaeus punctatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 321.

♀. Posterior tibiae strongly arcuate, with one or two long, fine, spiniform, pallid setae amongst the shorter ones at the apex.

Hab. Panama, Chiriqui.

The three specimens seen of this species are probably all of the female sex, the male (?) noticed by Gorham having simple 5-jointed anterior tarsi; in this example antennae are a little longer and more slender, and the posterior legs are darker. The coarser puncturing of the elytra and the simple posterior tibiae (♀) separate *P. punctatus* from the same sex of *P. armatus*; and the cyaneous, more closely punctured elytra, and the more bowed, darker posterior tibiae, distinguish it from *P. seminulum*.

Pseudebaeus.

Pseudebaeus, Horn, Trans. Am. Ent. Soc. iv, pp. 109, 118 (1872).

This North-American genus is characterised by the simple 5-jointed anterior tarsi in the two sexes, and the abruptly pallid, prolonged, hooked apices of the elytra in the male. The four known forms seem to be widely distributed in the Middle and Southern States, one of them, *P. oblitus* (Lec.), extending northward to Canada,

and another, *P. pusillus* (Say), reaching the highlands of Central Mexico. A description of the Mexican insect is appended, Horn's brief diagnosis of *P. pusillus* not quite tallying with that of Leconte and Say.* *Pseudebaeus* is the only genus known as yet from Mexico with appendiculate elytra in the male. It was unknown to Gorham.

1. *Pseudebaeus pusillus.* (Plate II, figs. 18, 18*a*, ♂.)

Malachius pusillus, Say, Journ. Acad. Phil. v, p. 170 (1825).
Ebaeus pusillus, Lec., Proc. Acad. Phil. 1852, p. 167.
Pseudebaeus pusillus, Horn, Trans. Am. Ent. Soc. iv, pp. 118, 119 (1872).

Moderately elongate, narrow, the head and the middle of the disc of the prothorax shining, the rest of the upper surface opaque and densely, minutely shagreened; black, the elytra violaceous or greenish, the four or five basal joints of the antennae, the legs (except the extreme base of the posterior femora in some examples), and the prolonged apical callosities of the elytra of the ♂, testaceous or flavous; clothed with very fine, ashy, sericeous pubescence. Head polished, obsoletely punctulate, including the eyes as wide as the prothorax in ♂, arcuately depressed in front and sulcate between the eyes anteriorly in ♂, transversely depressed in front in ♀; antennae slender, long, very feebly serrate, joints 5–10 gradually decreasing in length. Prothorax broader than long, strongly rounded at the sides anteriorly, obliquely narrowed behind, obsoletely foveate before the base. Elytra much broader than the prothorax, ample, covering the abdomen, subparallel and callose at the tip in ♂, widened posteriorly and with the apices conjointly rounded in ♀, the humeri tumid. Legs long and slender in both sexes.

♂. Elytral callosities oblong, very prominent, the apices each produced into a broad, vertical, flap-like appendage, enclosing the long, sinuous, inwardly directed hook, the upper margin of the vertical plate narrowly cleft and bifid as seen from in front or behind (fig. 18*a*).

Length 2¼–2½ mm. (♂ ♀.)

Hab. Southern United States; Mexico, Puebla (*Truqui, in Mus. Brit.*, ♂♀; *Mus. Oxon.*, ♀).

The above description was drawn up from one male and six females from "Mexico" (one only of which is labelled with a definite locality) before the identification with the

* He gives the elytra as black, instead of bluish or bluish-green.

N.-American *P. pusillus* was suspected. A very graceful insect extremely like *P. oblitus* (Lec.), a female of which from Michigan (*in Mus. Oxon.*) is before me, differing from the corresponding sex of that species in having the elytra longer, more finely shagreened, opaque, and less inflated posteriorly. *P. oblitus* is said by Horn to have the last segment of the abdomen yellow and deeply grooved in the male, whereas it is black and apparently ungrooved in the same sex of *P. pusillus*.

Sphinginus.

Sphinginus, Rey, Vésiculifères, p. 180 (1867); Abeille de Perrin, Ann. Soc. Ent. Fr. 1890, pp, 364, 396.

A very peculiar, Anthiciform Malachiid found by Mr. H. H. Smith in Guerrero, Mexico, is, in the absence of the male, provisionally referred to *Sphinginus*, with which it agrees in the structure of the head, palpi, antennae, and prothorax. *Temnopsophus*, Horn, type *T. bimaculatus*, from Louisiana, described from a single male example, is a somewhat nearly allied genus.* *Sphinginus* includes at present various Mediterranean forms, but its distribution may be similar to that of *Attalus*, *Anthocomus* and *Micromimetes*. *Troglops*, again, is another genus with a similarly shaped prothorax.

1. *Sphinginus* (?) *eburatus*, n. sp. (Plate II, fig. 19, ♀.)

♀. Elongate, narrow, opaque, scabrous; black, the prothorax (a small patch on each side excepted) rufous, the elytra with a narrow, transverse, smooth, ivory-white, raised median fascia extending from near the suture to close to the outer margin, the membranous portions of the abdomen whitish; indistinctly pubescent, the elytra also set with scattered, suberect, stiff black setae. Head large, about as long as broad (as seen from above), considerably developed and obliquely narrowed behind the eyes, densely scabroso-punctate; eyes large and prominent; antennae moderately long, feebly serrate, joints 3–10 decreasing slightly in length, all longer than broad; palpi slender, last joint of the maxillary pair acuminate-ovate. Prothorax longer than broad, oval, rather narrow, constricted before the base, a little smoother than the head; with a

* *Cephaloncus biguttatus*, Abeille de Perrin, from Syria, to judge from his figure (♀), is very like *Temnopsophus*. Westwood's type of *Cephaloncus* was from the Canaries. There is a specimen of *T. bimaculatus*, Horn, in the Hope Museum at Oxford.

broad, deep, arcuate furrow behind, the disc in front of it appearing gibbous. Scutellum transverse. Elytra comparatively short and broad, inflated posteriorly, leaving two abdominal segments exposed; densely scabroso-punctate. Legs slender. Wings fully developed.

Length $2\frac{1}{6}$ mm.

Hab. Mexico, Rio Papagaio in Guerrero, Pacific slope, 1,200 feet (*H. H. Smith*).

The narrow, transverse, ivory-white callus extending across the middle of the disc of each elytron is a unique character amongst the known Malachiids. One specimen, captured in October.

Anthocomus.

Anthocomus, Er., Entomographien, p. 97 (1840) (part.); Horn, Trans. Am. Ent. Soc. iv, p. 109; Abeille de Perrin, Ann. Soc. Ent. Fr. 1891, p. 355.

The two small insects here referred to *Anthocomus* (type, *A. sanguinolentus*, F.) have the anterior tarsi of the male simply 5-jointed, and formed as in the female, *i. e.* there is no modification of the basal joints of the male front foot such as is to be found in *Attalus*, including those wanting the upper lobe to the second joint. The elytra in each of them are slightly compressed posteriorly in the male (due to some extent to shrinkage after death); but they are not appendiculate or prolonged at the apex. *A. fuscescens* (Gorh.) has the posterior tibiae of the female formed as in the same sex of *Attalus varicus* and *Pseudattalus armatus*. One male only of each species is at present available for examination.

1. *Anthocomus fuscescens.*

♂. *Attalus fuscescens*, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 319.

♀. *Attalus* (?) *calcaratus*, Gorh., loc. cit., t. 13, figs. 3, 3*a*.

♂. Anterior tarsi simply 5-jointed, 1–4 short, 5 as long as 2–4 united; posterior tibiae feebly curved; elytra subparallel.

♀. Posterior tibiae (fig. 3*a* of Gorham) strongly curved, produced at the apex into a long dentiform process which reaches as far as the apex of the first tarsal joint; elytra much widened posteriorly.

Hab. Panama, David, Tolé, and Taboga Island.

Gorham's description of *A. fuscescens* must have been taken from a male, as he does not allude to the peculiar form

of the hind tibiae of the female, except under *A. calcaratus*. The four specimens before me from Taboga include a pair remounted by him on the same piece of card, and labelled "*A. fuscescens*, type," the others being females. The elytra vary in colour from wholly black to livid testaceous with the base broadly and indeterminately black. The posterior femora are sometimes infuscate to near the tip. The eyes are large.

2. *Anthocomus viridescens*, n. sp.

Elongate, narrow, shining; black, the head (except at the antennal insertion) and prothorax aeneous, the latter with the margins and base testaceous, the elytra greenish, the basal joints of the antennae and the tarsal joints 1–4 testaceous or obscure testaceous, the femora and tibiae piceous; sparsely pubescent and also set with semierect bristly hairs. Head transverse, polished, with excessively minute scattered punctures; eyes moderately large; antennae short in both sexes. Prothorax convex, slightly broader than long, sparsely, minutely punctate. Elytra long, slightly widened posteriorly in ♂, a little more inflated behind in ♀, not much broader than the prothorax at the base; rugulose, closely, conspicuously punctate. Legs slender; posterior tibiae moderately curved and simple in both sexes.

Length 2 mm. (♂♀.)

Hab. Mexico (*Truqui, in Mus. Brit.*).

Two specimens, assumed to be sexes of the same species. *A. viridescens* agrees with *A. fuscescens* in having simple 5-jointed anterior tarsi in the male; but differs from it in the unarmed, feebly curved posterior tibiae of the female, the metallic coloration, the smaller eyes, the rugulose, conspicuously punctate elytra, etc. The elytra are obliquely compressed at the tip in the male.

Lemphus.

Lemphus, Er., Entomographien, p. 131 (1840); Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 321.

1. *Lemphus serricornis.*

Lemphus serricornis, Gorh., loc. cit. p. 321, t. 13, fig. 5 (♂).

Hab. Panama, near the city and Taboga Island.

Two males and three females have been seen of this insect. A co-type (♀) of the Venezuelan *L. mancus*, Er.,

is before me. It is larger than *L. serricornis*; the head, antennae (the basal joints excepted), legs, and elytra (a short oblique streak before the middle of the disc excepted), are black; the prothorax is rufous, with a black patch on the disc in front; and the antennae are feebly serrate. The male of *L. mancus* is unknown. The antennae are serrate in both sexes of *L. serricornis*, these organs being long and acutely dentate in the male. Another species has been described by Pic, *L. albofasciatus*, from Brazil.

Dromanthus.

Dromanthus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 121, 322.

There is but little to add to Gorham's descriptions of the six species he included under *Dromanthus*, except to call attention to the peculiar structure of the posterior tarsi of the males of certain forms, only a single specimen (of *D. opacus*) having come to hand since 1886. The tarsi, it may be observed, are described as 4-jointed, the minute additional penultimate joint (formed exactly as in *Lemphus*) having been overlooked. *D. jucundus*, Gorh., would perhaps be better placed under *Lemphus*, in which the elytra are rather short, and the last three or four abdominal segments are exposed in both sexes; but as the male is unknown, it can remain under *Dromanthus* for the present. Various S.-American forms have recently been added to the genus by Pic.

1. *Dromanthus opacus*.

Dromanthus opacus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 122.

♂. Antennae with joints 5–10 broadly widened, becoming narrower outwards, 11 considerably narrower than 10; posterior tarsi with joint 1 curved and produced at the inner apical angle into a long slender process which reaches as far as the apex of 2, 2 also curved and elongated.

♀. Antennae with joints 3–10 sharply triangular, 3 as long as 4, 4–8 wider than 3.

Hab. Mexico, Playa Vicente and Cordova (*Sallé*), Teapa (*H. H. Smith*).

The description was made from a single immature ♀ example from Playa Vicente, Vera Cruz; the male is from Cordova.

2. *Dromanthus laticornis.*

Dromanthus laticornis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 322.

♂. Antennae with joints 4–11 very broadly widened, 11 not much narrower than 10; posterior tarsi with joint 1 curved, slightly produced at the inner apical angle, 2 short, not longer than in ♀.

♀. Antennae with joints 4–11 narrower, shaped very much as in same sex of *D. opacus.*

Hab. Panama, Chiriqui.

Three specimens seen, one of which, marked "type" by Gorham, is a male. This insect is extremely like *D. opacus*, but is separable therefrom by the broader antennae and less elongated basal joints of the posterior tarsi of the male, and the much less acutely serrate intermediate antennal joints of the female. The colour, sculpture, and vestiture of the prothorax and elytra are precisely similar.

3. *Dromanthus nitidicollis.*

Dromanthus nitidicollis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 322, t. 13, fig. 6.

♂. Antennae with joints 5–10 very broadly widened, acute at the inner apical angle, 11 elongated, narrower, and yellow; posterior tarsi with joint 1 curved and produced at the inner apical angle into a long slender process which reaches as far as the apex of 2, 2 also curved and elongated.

Hab. Panama, Bugaba.

Described from two males. This insect has the posterior tarsi of the male formed as in the same sex of the Mexican *D. opacus*, from which it is separable by the yellow apical joint of the antennae and the flatter and more shining prothorax. The antennae are less widened than in *D. laticornis*, ♂, and the posterior tarsi differently formed. The tarsal structure is not mentioned in the description or shown in the figure of *D. nitidicollis.*

4. *Dromanthus decipiens.*

Dromanthus decipiens, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 122, t. 7, fig. 5.

♂. Antennae with joints 4–10 moderately broad and acutely triangular; posterior tarsi simple.

Hab. Panama, Chiriqui.

The specimen reserved for the "Biologia" collection is the male labelled by Gorham as the type. The antennal joints 4–10 are acutely serrate, as in the female of *D. opacus*. *D. decipiens* has the elytra closely, rather coarsely punctate, and shining.

5. *Dromanthus quadrimaculatus.*

Dromanthus quadrimaculatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 122, t. 7, fig. 4.

Hab. Nicaragua, Chontales.

The unique type of this insect appears to be a female. It has the general facies and colour of a spotted *Collops*. The antennal joints 5–10 are moderately widened and serrate. The marginal fold of the elytra is very conspicuous.

6. *Dromanthus jucundus.*

Dromanthus jucundus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 123, 323, t. 7, fig. 6.

Hab. Panama, Chiriqui.

There are five specimens of this remarkable insect in the "Biologia" collection, probably all females, to judge from their comparatively small head, short, sharply serrate antennae, and simple posterior tarsi.

Fam. MELYRIDAE.

Subfam. Dasytinae.

Holomallus.

Holomallus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 325 (1886).

The type (♂) of this genus, *H. aurivillus*, Gorh., is closely related to *Trichochrous* (sensu Casey), differing from it in the less prominent humeri and the oblong-ovate general shape of the body, this being especially noticeable in the male. The antennae have the five outer joints widened into a definite club, as in *T. femoralis* (Gorh.), and the tibiae are as closely and strongly spinulose as in *T. arcuaticollis* and its allies. The female of *H. serripes* has the general facies of a *Byturus*.

1. *Holomallus aurivillus.*

Holomallus aurivillus, Gorh., loc. cit. p. 326.

♂. Tibiae with two short stout spurs; fifth ventral segment broadly truncate at the apex, leaving the long, excavate, sixth segment exposed.

Hab. Mexico, Puebla.

2. *Holomallus serripes*, n. sp. (Plate II, fig. 20, ♂, anterior tibia.)

♂. Oblong-ovate, rather convex, the head and prothorax opaque, the elytra somewhat shining; nigro-piceous, the elytra reddish-brown or aeneo-piceous, the antennal joints 2–6 and the legs ferruginous or fusco-ferruginous; thickly clothed with rather long, coarse, pallid, shaggy, decumbent hairs, the head and prothorax with intermixed erect hairs, the marginal cilia of the elytra long, curled, and closely placed. Head small, short, densely, finely, rugulosely punctate; antennae short, the five outer joints widened into an elongate club, 7–10 strongly transverse, 9 and 10 wider than 8, 11 short-ovate, narrower than 10, 5 not larger than 6. Prothorax strongly transverse, broad, greatly rounded at the sides, narrowing from near the base, the latter sinuate; densely, finely punctate. Elytra broad, somewhat oval, the humeri not prominent, the lateral carina conspicuous; densely, moderately finely punctate. Fifth ventral segment truncate at the tip. Legs rather stout; tibiae closely and strongly spinose along their outer edge (fig. 20), the anterior and intermediate pairs with two short, stout, approximate spurs.

♀. Narrower, the prothorax smaller, the elytra subparallel in their basal half, the tibial spurs smaller and more slender.

Length 4–4½, breadth 1¾–2⅛ mm. (♂♀.)

Hab. Mexico (*Truqui, in Mus. Brit.; Mus. Oxon.*).

Thirteen specimens. Very like the unnamed abraded *Holomallus* (♀) from Puebla mentioned by Gorham (loc. cit. p. 326); but with the vestiture almost wholly decumbent, except on the head and prothorax, the elytra much more finely punctate, etc. The Puebla insect is too worn to describe. *H. aurivillus* is thickly clothed with extremely long, fulvous, shaggy hairs.

Trichochrous.

Trichochrous, Motschulsky, Bull. Mosc. ii, p. 393 (1859); Casey, Ann. N. York Acad. Sci. viii, pp. 458, 466 (1895); Fall, Trans. Am. Ent. Soc. xxxiii, pp. 236–240 (1907).

Pristoscelis, Leconte, Class. Col. N. Am. p. 193 (1861) (part., *nec* Woll.); Gorham, Biol. Centr.-Am., Coleopt. iii, 2, pp. 123 (1882), 327 (1886).

Cradytes, Casey, loc. cit. pp. 458, 533.

Casey, in his Revision of the N.-American Melyrinae, restricts *Pristoscelis* to the Californian *P. grandiceps*, Lec., and places the other species usually referred to that genus under *Trichochrous*, Motsch., the former having "the epistoma obsolete and the frontal margin of the head beaded throughout its entire width." *Cradytes* has already been sunk by Fall as untenable. *Trichochrous* appears to be one of the largest genera of N.-American Coleoptera, and its species are said to occur in unnumbered scores in the western regions of that continent; 87 are enumerated by Casey, nearly 40 of which are described by him as new from single examples, and various others have since been added by Fall. Gorham had very little material, even when he finished his Supplement in 1886, nine only being mentioned by him. This number is now raised to 29, mainly from the Mexican collections made by Truqui, Höge, and H. H. Smith, one species only, and that from the summit of the Volcan de Fuego, being known as yet from Guatemala. Amongst the various genera made by Casey at the expense of *Trichochrous*, one at least of which was made on a secondary sexual character, *Cradytes* is known to me from Mexico, and it is just possible that some of the forms here referred to *Trichochrous* may prove to be better placed in *Sydates* or *Sydatopsis*. The Mexican species enumerated below show a complete gradation in the structure of the antennae, the forms placed at the head of the genus having the joints from the fifth, sixth, or seventh broadly serrate and progressively widened, and those placed towards the end having the intermediate joints more slender and irregularly serrate (5 and 7 being often wider than 6 or 8) and the last three dilated into a definite club.

Key to the Mexican and Guatemalan species of Trichochrous (= *Pristoscelis*, Gorh.).

A. Prothorax with the lateral margins conspicuously serrate, crenulate, or hooked, and sometimes greatly elongated, in ♂; tibiae feebly, sparsely spinulose; antennae with joints 7–10 broad, strongly serrate . . . . . [CRADYTES, Casey.]

a. Prothorax (♂) subquadrate, with distinct anterior angles.

a^1. The lateral margins sharply serrate anteriorly . . . . . *denticulatus*, n. sp.

b^1. The lateral margins sharply hooked anteriorly . . . . . *hamatus*, n. sp.

b. Prothorax (♂) very elongate, the anterior angles obliterated, the lateral margins closely crenulate anteriorly . *crenulatus*, n. sp.

B. Prothorax with the lateral margins not conspicuously serrate in ♂, at most obsolete crenulate in the two sexes . [TRICHOCHROUS, Motsch.]

c. Antennae abruptly serrate from joint 5, the latter not or very little broader than 6 (except in *T. fuscovittatus*).

c^1. Tibiae closely, strongly spinulose; antennae and legs stout, antennal joints 5–10 becoming progressively wider.

a^2. Upper surface with intermixed erect black setae.

a^3. Femora, tibiae, and tarsi rufescent, body wholly black . . *fulvipes*, Gorh.

b^3. Femora infuscate, tibiae, tarsi, and elytra rufescent . . . . *rufipennis*, Lec.

b^2. Upper surface without intermixed erect setae, the hairs semierect.

c^3. Elytra rufescent or violaceous; prothorax strongly rounded at sides; vestiture coarse and in great part pale . . . . *arcuaticollis*, n. sp.

d^3. Elytra cyaneous; prothorax less rounded at sides; vestiture fuscous . . . . . *cyanipennis*, n. sp.

d^1. Tibiae sparsely, strongly spinulose; antennal joints 5–10 subequal in width; elytra truncate at apex; body black, shining, broad; vestiture fine, decumbent . . . . *truncatipennis*, n. sp.

e^1. Tibiae more feebly spinulose.

c^2. Legs black; upper surface with numerous intermixed erect setae, the general vestiture close; prothorax (♂) large; antennal joints 5–10 becoming progressively broader.

e^3. Elytra elongate, closely punctured: species large . . . *pubescens*, Gorh.

f^3. Elytra short, rugosely punctured, dull: species smaller . . *dilaticollis*, n. sp.

d^2. Legs partly or entirely red; antennae less widened outwards.

g^3. Upper surface with intermixed erect setae; vestiture long.

a^4. Femora, tibiae, and tarsi red; elytra broadly fusco-vittate, the whitish hairs along suture and sides very long and fine . . . . . *fuscovittatus*, n. sp.

b^4. Tibiae and tarsi red; elytra aeneous, not vittate; joint 11 of antennae shorter.

a^5. Antennae with intermediate joints rufescent; prothorax more rounded at sides . . . . . *paleatus*, n. sp.

b^5. Antennae black; prothorax less rounded at sides . *fuscicornis*, n. sp.

c^4. Tarsi only red; elytra aeneous; joint 11 of antennae long . *rufitarsis*, n. sp.

h^3. Upper surface without intermixed setae; vestiture fine; legs red . . . . . *hidalgoanus*, n. sp.

d. Antennae (except in *T. diversicornis*, ♂) more feebly and regularly serrate from joint 5, 9–11 not abruptly wider than 8; tibiae feebly or obsoletely spinulose.

f^1. Upper surface with numerous intermixed erect setae; prothorax oblong, subglobularly convex; antennae (♂) moderately long; body black; legs red . . . . . *mexicanus*, Casey.

g^1. Upper surface with a few intermixed erect setae.

e^2. Antennae long and with joints 4–10 triangular in ♂, much shorter and serrate from joint 5 in ♀; prothorax transverse; body aeneous, shining; legs red . . . *diversicornis*, n. sp.

f^2. Antennae short, feebly subequally serrate; prothorax oblong; body aeneous; legs piceous; tibiae obsoletely spinulose . . . . *salvini*, Gorh.

e. Antennae abruptly serrate from joint 6, 6–10 strongly transverse, becoming progressively broader; body nigro-aeneous; legs piceous; upper surface with intermixed semierect bristly hairs . . . . . *clavatus*, n. sp.

f. Antennae abruptly serrate from joint 7, 7–10 broad; body aeneous, thickly set with numerous intermixed erect setae; tibiae and tarsi red . . . . . *femoralis*, Gorh.

g. Antennae feebly, irregularly serrate from joint 5, 5 larger than 6, 9–11 widened into a more or less distinct club; tibiae feebly or obsoletely spinulose, and often setose.

h^1. Elytral epipleura much widened anteriorly, the marginal carina prominent; upper surface with numerous intermixed erect setae; body nigro-aeneous; antennae and legs black.

g^2. Prothorax densely, rugosely punctured, dull . . . . . *aeneipennis*, Gorh.

h^2. Prothorax more sparsely punctate, shining . . . . . *nigroaeneus*, Gorh.

i^1. Elytral epipleura narrow.

i^2. Body black, aeneous, or greenish; antennae and legs black or piceous.

i^3. Upper surface with intermixed erect setae.	
d^4. Body subcuneiform in ♂, oblong in ♀	*subcuneatus*, n. sp.
e^4. Body oblong in both sexes.	
c^5. Setae very long; fifth ventral segment (♂) not foveate	*setiger*, n. sp.
d^5. Setae shorter; fifth ventral segment (♂) very deeply foveate	*foveiventris*, n. sp.
j^3. Upper surface without erect setae.	
f^4. Form (♂♀) oblong.	
e^5. Prothorax closely punctate; body rather convex, surface coarsely punctate .	*nigripes*, n. sp.
f^5. Prothorax sparsely punctate; body slender, more depressed, surface finely punctate	*viridulus*, n. sp.
g^4. From (♂) oblongo-conic; body robust, vestiture coarse .	*conicus*, n. sp.
j^2. Body ferruginous; vestiture decumbent, fine: species very small	*ferrugineus*, Gorh.

1. *Trichochrous denticulatus*, n. sp. (Plate II, fig. 21, ♂, prothorax.)

♂. Elongate, parallel-sided, shining; black, with a faint brassy lustre, the elytra greenish, the tarsi piceous; clothed with shaggy cinereous hairs intermixed with an abundance of long erect black setae. Head closely punctate; antennae moderately long, the joints preceding the terminal one broad and strongly transverse. Prothorax subquadrate, along the median line about as long as broad, abruptly and obliquely narrowed anteriorly to the advanced apical portion, the sides armed with six or more projecting teeth which become longer and stouter towards the apex and obsolete towards the base, the hind angles obtuse; rather sparsely punctate on the disc, more closely so towards the sides. Elytra long, widest at the base, compressed below the humeri; closely, coarsely punctate, rugose before the middle. Beneath densely punctate, the anterior portion of the prosternum transversely wrinkled; fifth ventral

segment unimpressed, truncate at the apex. Tibiae rough, feebly spinulose and densely setose externally. Anterior femora thickened and truncated at the apex within.

♀. Prothorax small, transverse, narrowing from the base, obsoletely crenulate or serrulate at the sides anteriorly, closely punctate; the elytra much wider than the prothorax, greenish or violaceous; legs shorter and more slender; anterior femora simple.

Length $3\frac{1}{2}$–$4\frac{3}{4}$ mm.

Hab. Mexico, Saltillo in Coahuila (♂ ♀), Villa Lerdo in Durango (♂) (*Höge*).

Five males and three females. Very near *T.* (*Cradytes*) *longicollis*, Casey, from Arizona, the females referred to it differing from the males in a similar way, the prothorax (♂) strongly denticulate at the sides anteriorly. *T. longicollis*, however, is described as having the latter (♂) gradually and broadly arcuate and convergent at apex, and with the angles completely obliterated, whereas in the present insect the prothorax is abruptly and obliquely narrowed before the apex. The Arizona insect, moreover, is said to be black and considerably smaller; *T. denticulatus* has metallic elytra.

2. *Trichochrous hamatus*, n. sp. (Plate II, fig. 22, ♂, prothorax.)

♂. Elongate, parallel-sided, shining; black with an aeneo-cupreous lustre, the antennae and legs fusco-ferruginous; clothed with coarse, shaggy cinereous hairs intermixed on the head and prothorax and the base of the elytra with erect blackish setae. Head closely punctate; antennae short, the joints preceding the terminal one broad and strongly transverse. Prothorax subquadrate, along the middle line nearly as long as broad, obliquely and abruptly narrowed anteriorly to the advanced apical portion (as seen from above) and armed on each side at this place with a long, curved, downwardly and forwardly directed, hook, the margins obsoletely crenulate, the hind angles obliterated; rugulose, and finely, closely confusedly punctate. Elytra moderately long, widest at the base, transversely rugose and coarsely, closely punctate. Beneath densely punctate, the anterior portion of the prosternum transversely wrinkled; fifth ventral segment unimpressed, truncate at the apex. Tibiae rough, feebly spinulose and densely setose externally.

Length $4\frac{1}{3}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

One specimen, distinguishable at once by the single long curved hook or claw on each side of the prothorax towards the apex, the hook here replacing the row of small marginal teeth present in *T. denticulatus*.

3. *Trichochrous crenulatus*, n. sp. (Plate II, fig. 23, ♂, prothorax.)

♂. Elongate, parallel-sided, shining; black, with a brassy lustre, the elytra cyaneous, the tibiae and tarsi wholly or in great part ferruginous; thickly clothed with pale brownish shaggy hairs intermixed with long erect black setae. Head densely punctate; antennae short, joints 7–10 broad and strongly transverse. Prothorax considerably longer than broad, parallel-sided, the sides arcuately converging at the apex and closely crenulate to near the base, the apex arcuate-emarginate in the middle, the hind angles obliterated; closely, rather finely punctate. Elytra a good deal wider than the prothorax, subparallel in their basal half; rugose and densely punctate. Beneath densely punctate, the anterior portion of the prosternum almost smooth, the narrow post-coxal portion dentiform; fifth ventral segment truncate at the apex. Tibiae rough, feebly spinulose and densely setose externally, the anterior pair curved. Anterior femora compressed and hollowed at the middle within.

♀. Prothorax small, transverse, narrowing from the base, obsoletely crenulate at the sides; legs shorter and more slender.

Length 4–4⅝ mm. (♂♀.)

Hab. Mexico, Guadalajara (♂ ♀), Chilpancingo (♂), and Zapotlan (♀) (*Höge*).

Six males and three females, the latter, as in *T. denticulatus*, differing greatly from the males in the shape and armature of the prothorax. The cyaneous elytra and ferruginous tibiae and tarsi are, however, characters common to the two sexes.

4. *Trichochrous fulvipes*.

Pristoscelis fulvipes, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 328.

Hab. Mexico, Aguas Calientes city (*Höge*); ?? Guatemala.

Gorham described *T. fulvipes* from a single (♀) example from "Guatemala." This locality is almost certainly incorrect, due to some mistake in labelling, no insect of

the kind being known from that country. Moreover, we now have three (♀) examples of a *Trichochrous* from Aguas Calientes, Mexico, that must be referred to the same species. It is chiefly recognisable by its shining black body, thickly clothed with long, decumbent, shaggy pallid hairs, intermixed with scattered erect black setae; the wholly ferruginous, rather stout legs; the closely, strongly spinulose tibiae; and the broad, sharply serrate antennae. The elytra are densely, moderately coarsely, the prothorax finely and rather sparsely, punctate; the epistoma is flattened. Three abraded examples (♀) from Paso del Norte, with shorter hairs and more finely punctured elytra, may also belong here. The pallid hairs are very long in the type.

5. *Trichochrous rufipennis.*

Dasytes rufipennis, Lec., Proc. Acad. Phil. 1858, p. 71.
Pristoscelis rufipennis, Lec., op. cit. 1866, p. 356; Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 327.
Trichochrous rufipennis, Casey, Ann. N. York Acad. Sci. viii, pp. 472, 516.

Hab. North America, Gila, Arizona; Mexico, Puebla.

The single female specimen from Puebla referred by Gorham to this species agrees with Casey's brief description of the abraded type, except that no mention is made of the numerous intermixed erect dark setae on the prothorax and elytra, these being conspicuous in the Mexican insect. The latter has the elytra, tibiae, and tarsi ferruginous; the tibiae closely and strongly spinulose externally; the elytra broad, rather finely punctate, with the marginal carina feebly developed and completely invisible from above; the antennal joints 5–10 strongly transverse, becoming progressively wider outwards. Amongst the Mexican forms it can only be compared with *T. arcuaticollis*, which has a more rotundate prothorax, more coarsely punctate, narrower elytra, etc.

6. *Trichochrous arcuaticollis*, n. sp.

♂. Elongate, subcylindrical, shining; black, the elytra varying in colour from violaceous with the apex rufescent to entirely ferruginous, the violaceous suffusion sometimes reduced to a common triangular scutellar patch or to an anteriorly dilated sutural stripe, the antennae in part or entirely, the apical one or two ventral seg-

ments, the tibiae and tarsi, and sometimes the femora also, ferruginous; thickly clothed with long, coarse, pallid hairs, the elytra with still longer marginal cilia. Head densely, rugosely punctate, the epistoma broad; antennae stout, short, joints 5–10 strongly transverse, becoming progressively broader outwards, 11 narrower than 10. Prothorax transverse, rather convex, strongly rounded at the sides, the base slightly hollowed laterally (the truncated median portion thus appearing narrow), the hind angles obliterated; closely, very coarsely punctate. Elytra elongate, a little wider than the prothorax, rather convex, subparallel to beyond the middle, the marginal carina moderately prominent and just visible from above; closely, coarsely punctate throughout. Beneath densely, finely punctate; fifth ventral segment unimpressed, truncate at the apex. Legs stout, the tibiae closely spinulose and thickly setose.

♀. Prothorax smaller, and narrowed from about the basal third forwards; fifth ventral segment ferruginous at the apex only, the latter rounded.

Length $4\frac{3}{4}$–$6\frac{1}{10}$ mm. (♂♀.)

Hab. Mexico (*Truqui, in Mus. Brit.*: ♂ ♀), Venta de Zopilote in Guerrero, 2,800 feet (*H. H. Smith*: ♂).

Nine males and one female, showing a complete gradation in the colour of the elytra, from violaceous (the apex excepted) to ferruginous. An elongate, subcylindrical form, with a transversely rotundate prothorax and very coarsely punctate upper surface, clothed with long, shaggy, pallid hairs, without intermixed darker erect setae, the tibiae closely spinulose externally. *T. mexicanus*, Casey, from North Mexico, seems to be nearly allied; but as it is said to have an unusually elongate prothorax in the male and feebly serrate antennae, it must be different from the present species. The insect (♀) referred by Gorham to *T. rufipennis* (Lec.) is more finely punctate above, and has erect black setae intermixed with the pallid hairs.

7. *Trichochrous cyanipennis*, n. sp.

♀. Elongate, robust, somewhat depressed, moderately shining; black, the elytra cyaneous, the apices of the latter, the third and fourth antennal joints, the apices of the femora, the tibiae and tarsi, and the tip of the last ventral segment, rufescent; thickly clothed with long fuscous hairs, without intermixed, erect, longer setae, the marginal cilia of the elytra very long, the hairs on the legs and under surface pale brown. Head short, densely, rugosely punctate,

the epistoma flattened; antennae short, stout, joints 5–10 strongly transverse, becoming progressively wider outwards. Prothorax short, transverse, narrowed anteriorly, the hind angles obliterated, the base feebly sinuate towards the sides; densely, coarsely punctate, the punctures here and there longitudinally confluent, with an indication of a smooth median line towards the base. Elytra elongate, considerably wider than the prothorax, subparallel in their basal half, the marginal carina moderately prominent; closely, coarsely punctate. Beneath very densely, finely punctate. Legs stout, the tibiae closely spinulose and setose.

Length 5–5½ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

Two females. Very like the single known specimen of the same sex of *T. arcuaticollis*, but less convex, with the prothorax broader behind and less sinuate at the base, the vestiture almost wholly fuscous above. In one example the elytra are rather broadly and abruptly rufescent at the apex.

8. *Trichochrous truncatipennis*, n. sp.

♂. Elongate, rather broad, moderately convex, shining; nigropiceous, the antennal joints 2–5 obscure ferruginous; somewhat thickly clothed with fine, pallid, adpressed hairs, without intermixed setae, the marginal cilia of the elytra long, those along the lateral margins of the prothorax short and closely placed. Head densely punctate, the epistoma short and flattened; antennae short, moderately stout, joints 5–10 strongly transverse, 5 larger than 6, 6–10 subequal. Prothorax broad, transverse, convex, feebly rounded at the sides, arcuately narrowed anteriorly, the base sinuate, the hind angles obliterated; closely, finely punctate. Elytra slightly wider than the prothorax, parallel in their basal half, sinuato-truncate at the apex, the sutural angle sharp, the marginal carina rather prominent, the epipleura a good deal widened anteriorly; closely, somewhat finely punctate, the punctures becoming a little coarser towards the base. Fifth ventral segment unimpressed, broadly truncate at the apex. Legs rather stout; tibiae with several spinules on their outer edge, those on the anterior and intermediate pairs long.

Length 4⅘, breadth 2 mm.

Hab. Mexico, near the city (*Höge*).

One male. Differs from all the allied forms in the truncate apices of the elytra, the fine punctuation, the non-setose, finely, uniformly pubescent upper surface, the

sparsely, strongly spinulose anterior and intermediate tibiae, and the rather broad, black, shining body.

9. *Trichochrous pubescens.*

Pristoscelis pubescens, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 124.

♂. Prothorax large, as wide as the elytra, more rounded at the sides and less transverse than in ♀; anterior and intermediate tibiae with a rather stout blunt spur at the inner apical angle; fifth ventral segment unimpressed, broadly truncate at the apex.

Hab. Mexico, Guanajuato (*Sallé*: type, ♀), Lagos and Aguas Calientes city (*Höge*: ♂ ♀).

The types of this species are females. Höge subsequently sent us a good series from the State of Aguas Calientes, including both sexes. A rather large, elongate form, with the body nigro-aeneous, and thickly clothed with long decumbent pale brownish hairs intermixed with an abundance of erect black setae; the puncturing dense and rather fine, even on the elytra; the tibiae sparsely spinulose externally; the legs, antennae, and palpi wholly black; the antennal joints 5–10 strongly transverse, becoming progressively wider; the head very densely punctate, the epistoma flattened.

10. *Trichochrous dilaticollis*, n. sp.

Pristoscelis fuscus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 328 (*nec* Lec.).

♂. Elongate, moderately shining; black, the elytra with a faint brassy lustre, the legs piceous, the anterior femora reddish beneath; thickly clothed with long decumbent cinereous hairs intermixed with scattered, erect, pallid and black setae, the marginal cilia long. Head densely, rugosely punctate, the epistoma flattened; eyes very large; antennae short, rather stout, joints 5–10 strongly transverse, becoming progressively wider. Prothorax very large, as wide as the elytra, broader than long, gradually, arcuately narrowed anteriorly, the angles obliterated; densely, finely punctate. Elytra moderately long, parallel in their basal half, the epipleura narrow; densely, finely, rugosely punctate. Fifth ventral segment feebly emarginate at the apex. Tibiae sparsely spinulose externally, the anterior and intermediate pairs with a very short, blunt, truncated tooth at the inner apical angle.

Length $3\frac{3}{4}$ mm.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

One male, doubtfully referred by Gorham to *T. fuscus* (Lec.). Separable from the allied Mexican forms by the greatly developed prothorax in the male, the large eyes, the short, stout, strongly serrate antennae, the parallel-sided, comparatively short, densely rugulose, dull elytra, the dense, double vestiture, and the distinctly spinulose tibiae.

11. *Trichochrous fuscovittatus*, n. sp.

Pristoscelis suturalis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 327 (*nec* Lec.).

♂. Oblong, robust, shining; black, the mouth-parts, antennae and palpi (except at the tips), and legs, and the epipleura (except at the base) and apical margin of the elytra, ferruginous; the head, prothorax, and scutellum, and the suture, sides and apex of the elytra, thickly clothed with long, adpressed, cinereous hairs intermixed with extremely long, fine, pallid, erect hairs, the disc of each elytron broadly fusco-pilose (thus appearing vittate), the marginal cilia extremely long and fine. Head closely, minutely punctate, the epistoma smooth and tumid in the middle; antennae short, rather slender, joints 5–10 triangular, transverse, 5 much wider than 4 or 6. Prothorax convex, broader than long, strongly rounded at the sides, narrowed anteriorly, the angles obliterated; closely, minutely punctate. Elytra moderately long, much wider than the prothorax, subparallel for some distance below the tumid humeri; closely, finely, asperato-punctate. Fifth ventral segment unimpressed, broadly truncate at the apex. Legs long, rather stout; tibiae spinulose externally, the anterior and intermediate pairs with a stout truncated spur at their inner apical angle; tarsi elongate, setose, the basal joint of the posterior pair obliquely produced at the apex beneath.

♀. Head smaller; antennae much shorter, joints 5–10 strongly transverse; prothorax smaller, more narrowed anteriorly; elytra shorter, widened posteriorly; legs shorter, the tarsi not nearly so elongate, the posterior pair simple.

Length 3–3½ mm. (♂♀.)

Hab. Mexico, Northern Sonora (*Morrison*).

Six males and one female. Casey (Ann. N. York Acad. Sci. viii, p. 511) has re-described *T. suturalis* (= *conformis*), Lec., from San Diego, California, and it is obvious that the Sonora insect has nothing to do with that species. The

broadly fusco-pubescent disc of the elytra, and the closely cinereo-pilose suture and apex, are characteristic. The intermixed pallid erect hairs are extremely long and fine. The sexual characters are strongly pronounced. *T. vittiger*, Casey, from New Mexico, is perhaps an allied form.

12. *Trichochrous paleatus*, n. sp.

♂. Moderately elongate, subcylindrical, shining; aeneo-piceous, the basal joints of the antennae (the first excepted) and the legs ferruginous, the knees or femora sometimes infuscate; thickly clothed with long, coarse, cinereous, decumbent hairs intermixed with scattered suberect black setae, the marginal cilia long. Head closely punctate, the epistoma tumid and smooth in the middle; antennae short, rather slender, joints 5–10 transverse, serrate, 5 a little broader than 6, 9 and 10 wider than 8. Prothorax convex, transverse, rounded at the sides, narrowed anteriorly, coarsely, closely punctate. Elytra subparallel, about as wide as the prothorax, bluntly, conjointly rounded at the apex; coarsely, closely punctate. Fifth ventral segment unimpressed, broadly truncate at the apex. Tibiae with a few scattered spinules along their outer edge.

♀. Prothorax smaller, less rounded at the sides, more narrowed anteriorly.

Length 3–3⅕ mm. (♂♀.)

Hab. Mexico, near the city, Pachuca (*Höge*).

Described from seven specimens from Mexico city, apparently all females but one. Very near *T. fuscicornis*, the decumbent cinereous hairs coarser, the antennae not wholly infuscate, the prothorax more rounded at the sides and in the male about as wide as the elytra. *T. texanus* (Lec.) is an allied darker form, with more numerous setae.

13. *Trichochrous fuscicornis*, n. sp.

♂. Elongate, subcylindrical, shining; aeneo-piceous, the tibiae and tarsi ferruginous; thickly clothed with shaggy pallid decumbent hairs intermixed with long, suberect, blackish setae, the marginal cilia very long. Head densely punctate, the epistoma smooth and tumid in the middle, the eyes rather depressed; antennae short, joints 5–10 transverse, serrate, 5 and 7 a little broader than 6 and 8, 9 and 10 about as wide as 7. Prothorax convex, broader than long, narrowed from near the base, coarsely, closely punctate. Elytra a little wider than the prothorax, subparallel in their basal

half, bluntly, conjointly rounded at the tip, transversely depressed below the base; coarsely, closely punctate, the punctures becoming finer towards the apex. Fifth ventral segment unimpressed, truncate at the apex. Tibiae with conspicuous scattered spinules along their outer edge.

Length $3\frac{1}{3}$–$3\frac{1}{2}$ mm. (♂♀.)

Hab. Mexico (*Truqui, in Mus. Brit.*).

Six specimens, the females differing very slightly from the males, the exact locality not recorded. An elongate, subcylindrical, aeneous form, with the prothorax narrowed from near the base in both sexes, the tibiae and tarsi rufescent, the tibiae with a few conspicuous spinules, the general vestiture long.

14. *Trichochrous rufitarsis*, n. sp.

♂. Elongate, subcylindrical, shining; aeneo-piceous, the antennae black, the tarsi rufo-testaceous, except at the tip; sparsely clothed with fine pallid hairs intermixed with numerous long, erect, bristly hairs. Head densely punctate, the epistoma flattened; antennae rather long, joints 5–10 transverse, broad, triangular, 5 a little larger than 6, 11 stout, elongate, acuminate-ovate. Prothorax convex, rounded at the sides, narrowed anteriorly, closely punctate. Elytra slightly wider than the prothorax, subparallel in their basal half, conjointly rounded at the tip; closely, coarsely punctate. Fifth ventral segment unimpressed, truncate at the apex. Tibiae obsoletely spinulose externally.

Length $2\frac{2}{3}$ mm.

Hab. Mexico, Oaxaca (*Höge*).

One male. Recognisable amongst the allied forms by its rufo-testaceous tarsi, rather long, sharply serrate antennae, with stout, acuminate apical joint, the closely punctured, convex prothorax, and the numerous intermixed erect bristly hairs on the upper surface. The sheath of the aedeagus (exposed in the type) is strongly curved, stout, and cylindrical, and acutely pointed at the tip beneath.

15. *Trichochrous hidalgoanus*, n. sp.

♂. Moderately elongate, subcylindrical, shining; aeneo-piceous, the palpi and antennae (except at the tip), and the legs, ferruginous; sparsely clothed with long, adpressed, fine, cinereous hairs, without intermixed erect setae, the marginal cilia curled and moderately long. Head closely punctate, the epistoma smooth and tumid in

the middle in front; antennae short, joints 5–10 triangular, becoming progressively wider, transverse, 11 ovate, narrower than 10. Prothorax transverse, as wide as the elytra, rounded at the sides, a little narrowed anteriorly, the angles obliterated; rather sparsely punctate, often with a narrow, smooth, impunctate space down the middle behind. Elytra subparallel, closely punctate, the punctures coarse at the base, becoming much finer towards the apex, the marginal carina moderately prominent. Fifth ventral segment unimpressed, truncate at the apex. Tibiae sparsely, finely spinulose externally.

♀. Prothorax less rounded at the sides and more narrowed anteriorly; elytra somewhat widened posteriorly.

Length $3\frac{1}{10}$–$3\frac{1}{5}$ mm. (♂♀.)

Hab. Mexico, Pachuca and Zacualtipan in Hidalgo (*Höge*).

A long series from Pachuca. Recognisable by the red legs and antennae, the latter being moderately serrate from the fifth joint, the rather sparse, wholly decumbent vestiture (the erect setae altogether wanting), the aeneo-piceous shining surface, the tumid median portion of the epistoma, etc.

16. *Trichochrous mexicanus.*

Trichochrous mexicanus, Casey, Ann. N. York Acad. Sci. viii, pp. 472, 515.

Hab. North Mexico (*coll. Levette*).

An oblong, strongly convex, feebly shining, black form, with rufescent legs and pallid antennae, and rather long, coarse, subdecumbent pubescence (which becomes darker and less conspicuous in an elongate dark streak on each elytron) intermixed with numerous long erect blackish setae; the prothorax subglobularly convex, nearly as long as broad, and coarsely, closely punctate; the elytra slightly wider than the prothorax, parallel, coarsely, densely punctate. Described from two males. Length $2\frac{3}{4}$ mm. Casey speaks of this insect as wholly different from any of the N.-American species described by him. He places *T. mexicanus* near *T. rufipennis*, Lec. It is unknown to me.

17. *Trichochrous diversicornis*, n. sp.

♂. Moderately elongate, narrow, shining; aeneo-piceous, the joints 2–4 of the antennae and the legs rufo-testaceous, the femora slightly infuscate; sparsely clothed with long, fine, pallid, decumbent

hairs with a few erect hairs intermixed, the marginal cilia long. Head very sparsely, finely punctate, the epistoma with a small, smooth, tuberculiform prominence; antennae long, serrate from the fourth joint, 4–10 triangular, 8–10 longer than broad, 11 elongate-ovate. Prothorax broader than long, convex, rounded at the sides, sinuously narrowed anteriorly; sparsely punctate on the disc, the punctures becoming more crowded towards the sides. Elytra broader than the prothorax, subparallel; closely, moderately coarsely punctate. Legs slender, long; tibiae sparsely and very distinctly spinulose externally.

♀. Broader, the elytra widest beyond the middle; antennae almost wholly testaceous (joint 1 excepted), much shorter, more slender, feebly serrate, joint 5 distinctly wider than 4 or 6, 9 and 10 about as broad as long.

Length 3 mm. (♂♀.)

Hab. Mexico, Northern Sonora (*Morrison*).

One pair, found placed with *T. fuscovittatus* (= *suturalis*, Gorh., *nec* Lec.) in the "Biologia" collection, the male partially abraded, the female in good condition. A slender, moderately elongate, cinereo-pilose, aeneo-piceous insect, with unusually elongate antennae in the male, the tibiae and tarsi and the basal joints of the antennae (the first excepted) rufo-testaceous. The antennae are serrate from the fourth joint in the male and from the fifth joint in the female.

18. *Trichochrous salvini.*

Pristoscelis salvini, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 124.

♂. Intermediate tarsi armed with a stout blunt spur at the inner apical angle.

Hab. Guatemala, summit of the Volcan de Fuego.

A narrow, elongate, aeneo-piceous insect, with the prothorax oblong, densely, finely punctate (except along an incomplete smooth median line); the elytra parallel-sided, densely, rather coarsely punctate; the antennae rather slender, joints 5–10 transverse, feebly serrate, 5 slightly larger than 6; the surface sparsely clothed with fine decumbent brownish pubescence intermixed with long fine erect hairs, these latter being conspicuous on the prothorax and along the margins of the elytra; the legs slender, scarcely stouter than in *Listrus*, the spinules only just traceable.

19. *Trichochrous clavatus*, n. sp.

♀. Moderately elongate, subcylindrical, rather convex, shining; nigro-aeneous, the antennae and legs piceous; sparsely clothed with intermixed decumbent and semierect longer bristly hairs, the latter very long at the sides of the prothorax and elytra. Head small, densely punctate; antennae short, much widened outwards, joints 6–10 strongly transverse, serrate, 5 small, 6 and 7 equal, wider than 5, 8–10 much broader than 7, 11 ovate, about as broad as long. Prothorax transverse, the sides arcuately converging anteriorly and subparallel towards the base; closely, very finely punctate, a little smoother along the median line. Elytra moderately long, considerably wider than the prothorax, parallel in their basal half, the marginal carina scarcely visible from above, closely, rather coarsely punctate. Tibiae rough, the anterior pair distinctly spinulose.

Length $3\frac{1}{4}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

One female. Very different from any of its Mexican allies, and recognisable by the five dilated outer joints of the antennae, the fifth joint being small; the short, very finely punctured prothorax; and the parallel-sided, rather broad elytra.

20. *Trichochrous femoralis.*

Pristoscelis femoralis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 328 (*nec* * Casey).

Hab. Mexico, Puebla.

The type of this insect is a female. It is compared by Gorham with *T. nigroaeneus*, from which it may be separated by its broader form, narrow epipleura, rufescent tibiae and tarsi, densely, finely punctate prothorax, less coarsely punctate elytra, much more abundant black setae, structure of the antennae, etc. The head is very densely punctured, the epistoma flattened. The antennae (♀) are short; joints 7–10 are strongly transverse, becoming progressively wider, 5 slightly larger than 6, 11 stout, ovate. The length is $4\frac{1}{10}$ (not 5) mm.

21. *Trichochrous aeneipennis.*

Pristoscelis aeneipennis, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 327.

* Casey's name *femoralis* is preoccupied: *caseyi* is here substituted for it.

Hab. Mexico, Durango.

The types (2) of *T. aeneipennis* are males. This is a species with the fifth antennal joint triangular and much larger than the sixth, the joints 6 and 8 subequal, 9 and 10 broader and strongly transverse, 9–11 forming a well-defined club. The entire upper surface in aeneous, thickly clothed with intermixed erect black setae and decumbent cinereous hairs; the prothorax is narrowed anteriorly, sinuate laterally at the base, and so closely punctate as to appear reticulate; the elytra are broader than the prothorax, somewhat acuminate, sharply margined and with broad epipleura, and coarsely, closely punctate; the fifth ventral segment is truncate at the apex and unimpressed; the tibiae are rather slender, and set with long bristly hairs. The length is $4\frac{1}{2}$ (not 5) mm.

22. *Trichochrous nigroaeneus.*

Pristoscelis nigroaeneus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 124 (part.) (*nec* p. 327).

♂. Elongate, aeneo-piceous, shining; somewhat thickly clothed with intermixed decumbent cinereous hairs and long, erect, black setae, the marginal cilia very long. Head short, closely punctate; antennae with joint 5 larger than 6, triangular, 6 and 8 subequal, 9 and 10 broader and strongly transverse, 9–11 forming a definite club. Prothorax a little broader than long, rapidly and sinuously narrowing from about the basal third, coarsely, rather closely punctate. Elytra long, slightly wider than the prothorax, somewhat acuminate posteriorly, with the margins sharply carinate and very prominent as seen from above, the epipleura broad, gradually narrowing towards the apex; coarsely, closely punctate. Beneath densely, very finely punctate; fifth ventral segment unimpressed, truncate at the apex. Tibiae with a few minute scattered spinules along their outer edge, and also set with long hairs.

♀. Prothorax strongly transverse; antennae shorter.

Length $3\frac{1}{2}$–4 mm. (♂♀.)

Hab. Mexico (*Truqui, in Mus. Brit.*; *Mus. Oxon.*: ♂♀), Jalapa (*Höge*: ♂♀).

Gorham confused various species under this name, but he selected and labelled a male from Jalapa as the type, and there are various other Mexican examples found by Truqui in the British Museum. *T. nigroaeneus* is very

closely related to *T. aeneipennis*, and it is only separable therefrom by its less rugose prothorax. The relatively broad epipleura and very prominent marginal carina of the elytra bring these insects near *Asydates*, Casey.

23. *Trichochrous subcuneatus*, n. sp.

♂. Elongate, subcuneiform, shining; nigro-piceous, with a brassy lustre, somewhat thickly clothed with erect blackish bristly hairs intermixed with a few decumbent shorter pallid hairs, the marginal cilia long. Head densely punctate, the epistoma smooth and tumid along the middle; antennae short, joints 5–10 transverse, serrate, 5 larger than 6, 6 and 8 subequal, 9 and 10 much broader, 9–11 forming a definite club. Prothorax broader than long, large, convex, narrowed anteriorly; coarsely, closely punctate. Elytra long, not wider than the prothorax, narrowed from the base, narrowly, conjointly rounded at the apex; closely, coarsely punctate, the punctures becoming smaller towards the tip. Fifth ventral segment unimpressed, truncate behind. Tibiae rough, sparsely setose.

♀. Prothorax smaller, more narrowed anteriorly; elytra subparallel in their basal half.

Length 3–3¼ mm. (♂♀.)

Hab. Mexico, near the city [♂♀], Aguas Calientes city [♀] (*Höge*).

Described from a pair from Mexico city. This is the only Mexican *Trichochrous* known to me with the elytra narrowed from the base in the male. The vestiture is almost wholly erect and dark. The female is very different from the male, and it might easily be mistaken for another species.

24. *Trichochrous setiger*, n. sp.

Pristoscelis nigroaeneus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 124 (part.).

♂. Moderately elongate, shining, nigro-aeneous; clothed with scattered pallid decumbent hairs intermixed with many very long, erect, bristly hairs, the marginal cilia also very long. Head closely punctate, the epistoma slightly tumid in the middle; antennae short, joints 5–10 transverse, serrate, 5 larger than 6, 6–8 subequal, 9 and 10 wider, 11 ovate. Prothorax convex, transverse, rounded at the sides, narrowing from a little before the base, closely, rather coarsely punctate. Elytra very little wider than the prothorax,

subparallel in their basal half; the marginal carina rather prominent and just visible from above, the epipleura narrow; closely, coarsely punctate. Fifth ventral segment truncate at the apex, with a shallow triangular depression in the middle behind. Tibiae rough and setose.

♀. Prothorax smaller, more narrowed anteriorly; elytra broader, widest beyond the middle.

Length $2\frac{4}{5}$–$3\frac{1}{4}$ mm. (♂♀.)

Hab. Mexico, Oaxaca (*Sallé*).

Three males and two females. Smaller and less elongate than *T. nigroaeneus*, the prothorax shorter, more convex, and more rounded at the sides, the elytral margins less expanded, the epipleura narrow. The coarse puncturing and the very long intermixed erect hairs on the upper surface distinguish *T. setiger* from various other allied forms. In one of the two females the interspaces between the punctures on the head and prothorax are densely alutaceous and opaque.

25. *Trichochrous foveiventris*, n. sp.

♂. Elongate, narrow, feebly convex, shining; nigro-aeneous or aeneo-piceous, the antennae and legs black or piceous; clothed with rather long, decumbent, cinereous or brownish hairs, the head, prothorax, and sides of the elytra with intermixed erect, blackish, bristly hairs, the marginal cilia moderately long and curled. Head densely punctate, the epistoma smoother and slightly tumid in the middle; antennae moderately long, rather slender, joints 5–10 serrate, 5 triangular and larger than 6, 6–10 transverse, 9 and 10 a little wider than 8, 11 ovate. Prothorax transverse, rounded at the sides, narrowed anteriorly, the base distinctly sinuate laterally; closely, rather finely punctate. Elytra a little wider than the prothorax, subparallel in their basal half, with the marginal carina somewhat prominent and visible from above; closely, rugosely punctate. Fifth ventral segment truncate at the apex, with a large, deep, foveiform excavation extending nearly the whole length of the segment. Tibiae rough, setulose.

♀. Prothorax narrowed from near the base; elytra broader and less parallel; antennae shorter and more slender.

Length 3–$3\frac{1}{4}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*; *Coffin, in Mus. Oxon.*), Morelia in Michoacan [♂ ♀], Mexico city (*Höge*), Tehuantepec [♂ ♀], (*coll. Fry, in Mus. Brit.*).

A long series, including pairs from Morelia and Tehuantepec. This species is distinguishable amongst its allies by the very large deep fovea on the fifth ventral segment of the male. It is less setose than *T. setiger*, the puncturing of the upper surface is not quite so coarse, and the ventral excavation is larger and very much deeper. A female from Puebla with brown decumbent hairs included by Gorham (loc. cit. p. 327) under *T. nigroaeneus* seems to belong here. The double vestiture of the upper surface distinguishes *T. foveiventris* from *T. nigripes*.

26. *Trichochrous nigripes*, n. sp.

Listrus punctatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 126 (part.).

♂. Moderately elongate, rather convex, shining; aeneous or aeneo-piceous, the antennae and legs black or piceous; clothed with decumbent cinereous hairs, without intermixed erect setae, the marginal cilia short. Head densely punctate, the epistoma without definite prominence; antennae moderately long, joints 5–10 transverse, serrate, 5 a little larger than 6, 9 and 10 much wider than 8, 11 ovate. Prothorax transversely convex, rounded at the sides, narrowed anteriorly, closely, moderately coarsely punctate. Elytra scarcely wider than the prothorax, subparallel in their basal half, closely, coarsely punctate. Fifth ventral segment truncate at the apex, transversely depressed and shallowly foveate in the middle behind. Tibiae obsoletely spinulose externally.

♀. Prothorax more narrowed anteriorly, not quite so wide as the elytra, the latter widest beyond the middle.

Length $2\frac{1}{2}$–$3\frac{1}{10}$ mm. (♂♀.)

Hab. Mexico (*Truqui*), Omilteme, Soledad, Xucumanatlan, and Chilpancingo, in Guerrero, 4,600–8,000 feet (*H. H. Smith*), Jalapa? (*Höge*).

A long series from Guerrero, the Mexican specimens referred by Gorham to *Listrus punctatus* also belonging here. A small aeneous insect, with the vestiture cinereous and wholly decumbent, the marginal cilia short, the prothorax short and convex, the elytral puncturing coarse and close, the fifth ventral segment of the male transversely depressed and shallowly foveate before the apex. The puncturing of the upper surface is coarser in some examples than in others. The complete absence of long erect bristly hairs on the upper surface separates *T. nigripes* from

various allied forms. The Guerrero specimens are taken as the types.

27. *Trichochrous viridulus*, n. sp.

♀. Elongate, narrow, shining; greenish aeneous, the antennae black, the legs piceous; clothed with wholly decumbent, rather long, pallid hairs, the marginal cilia short and inconspicuous. Head bi-impressed in front, finely punctate, the epistoma smooth and tumid in the middle; antennae very short, joints 5–10 transverse, 5 larger than 6, 9 and 10 much broader than 8, 11 ovate. Prothorax transverse, a little narrower than the elytra, narrowed from near the base; finely punctate, except along the smooth incomplete median line. Elytra long, subparallel in their basal half, somewhat depressed; closely, rather finely punctate, the punctuation becoming coarser at the base. Legs slender; tibiae distinctly spinulose externally.

Length 3¼ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*).

One female. This insect is not unlike *Listrus flavicornis*; but the antennae are very differently formed, the tibiae are distinctly spinulose, the posterior tarsi are much shorter, the prothorax is larger and more shining, etc. It cannot be compared with any of the other species of *Trichochrous* here enumerated. The puncturing of the upper surface is comparatively fine.

28. *Trichochrous conicus*, n. sp.

Pristoscelis nigroaeneus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 327 (part.).

♀. Elongate, subconical, shining; nigro-aeneous, the antennae and legs piceous, the tibiae and tarsi obscure ferruginous in one specimen; clothed with rather long, coarse, decumbent, cinereous hairs, without intermixed erect setae, the marginal cilia curled and long. Head small, densely punctate, the eyes not prominent; antennae very short, rather slender, joints 5–10 serrate, transverse, 5 broader than 6 or 8, 9 and 10 much wider than those preceding, 11 ovate. Prothorax not much broader than long, campanulate, closely, finely punctate. Elytra long, much wider than the prothorax, widening to beyond the middle, the marginal carina just visible from above; closely, moderately coarsely punctate, the interspaces transversely wrinkled. Tibiae rough and feebly spinulose.

Length (with head extended) 4–4⅛ mm.

Hab. Mexico, Monclova in Coahuila (*Dr. Palmer*).

Two females, quoted by Gorham in his Supplement under *T. nigroaeneus*, to which the present species bears no resemblance. The small head, campanulate prothorax, and posteriorly widened elytra, separate *T. conicus* at once from the females of all the other Mexican species of the genus known to me; the male may be differently shaped. The vestiture, too, though coarse, is wholly decumbent.

29. *Trichochrous ferrugineus.*

Listrus ferrugineus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 330 (1886).

Trichochrous exiguus, Casey, Ann. N. York Acad. Sci. viii, pp. 470, 497 (1895).

♂. Anterior and intermediate tibiae armed with a short, stout, blunt tooth at the inner apical angle; fifth ventral segment broadly truncate at the apex.

Hab. United States, Arizona; Mexico, N. Sonora.

A very small, Cryptophagiform insect, ferruginous in colour, with the head often broadly infuscate in the middle behind, the metasternum, and sometimes the abdomen also, and the tip of the antennae, black. The elytra are much broader than the prothorax in both sexes. The vestiture is wholly decumbent and flavescent, and the marginal cilia are long. The antennae are short, with joints 5–10 serrate, and transverse, 5 slightly larger than 6, and 9 and 10 much wider than those preceding. The tibiae are very feebly spinulose (when seen under the microscope), and the species is therefore not a true *Listrus*. Casey (op. cit. ix. p. 682) has already called attention to the synonymy. Three males and four females have been seen by me from Sonora.

Listrus.

Listrus, Motschulsky, Bull. Mosc. iv. p. 389 (1859); Gorham, Biol. Centr.-Am., Coleopt. iii, 2, pp. 125 (1882), 329 (1886); Casey, Ann. N. York Acad. Sci. viii, pp. 458, 540.

Thirty-two species of this genus are enumerated by Casey from N. America, one only of which is known to me from south of the Mexican border. *L. impressus*, Gorh., is here referred to *Dasytellus*, and *L. ferrugineus*, Gorh., to *Trichochrous*. The sixteen forms now recorded from

Mexico or Central America, eight of which are described as new, come very near some of the more feebly developed *Trichochrous*, differing from them in the non-spinulose slender tibiae. Amongst the N.-American representatives there are several with variegate pubescence, or with the elytra fasciate; but in the forms here dealt with the pubescence is uniform and entirely decumbent, the erect setae, present in many *Trichochrous*, being invariably absent. Two species of the present genus from the Ecuadorian Andes were described by Gorham in 1891.

Key to the Mexican and Central American species of Listrus.

a. Antennae long, slender, the penultimate joints (except in *L. subcupreus*) as long as broad, the fifth very little larger than the sixth.

a^1. Anterior and intermediate tibiae of ♂ strongly curved, sinuate within, and toothed at apex.

a^2. Fifth ventral segment of ♂ deeply excavate, and with two stout horn-like processes, the apical margin bearing a polished tubercle in the middle: species elongate . *subcyaneus*, Gorh.

b^2. Fifth ventral segment of ♂ flattened, and without such processes.

a^3. Fifth ventral segment of ♂ with a minute dentiform projection in middle behind: species larger and more elongate . . . . *cupreonitens*, Gorh.

b^3. Fifth ventral segment simple: species much smaller . . . *subcupreus*, n. sp.

b^1. Anterior and intermediate tibiae of ♂ not curved, the former toothed at apex . . . . . *flavicornis*, n. sp.

b. Antennae much shorter, the penultimate joints transverse, the fifth distinctly larger than the sixth, 9–11 forming a definite club.

c^1. Prothorax gibbous, with the lateral margins sharply crenulate; body very shining, narrow, brassy; legs, and antennae in part, red . . . *crenicollis*, n. sp.

d^1. Prothorax less convex, with the lateral margins very finely crenulate.
c^2. Vestiture long, coarse, and abundant.
c^3. Body metallic, the elytra at least shining; legs and antennae black; vestiture cinereous . . *senilis*, Lec.
d^3. Body olivaceous, opaque; antennae in part, and legs, red; vestiture white . . . . . *albidus*, n. sp.
d^2. Vestiture sparser.
e^3. Legs and antennae black; body aeneous or greenish: species moderately large.
a^4. Head very broad in ♂; body rather convex, shining, brassy *punctatulus*, n. sp.
b^4. Head not much wider in ♂ than in ♀; body more depressed.
a^5. Species larger; elytra much broader than prothorax in ♀ *versicolor*, Gorh.
b^5. Species smaller; elytra very little wider than prothorax in either sex . . . . *ciliatipennis*, n. sp.
f^3. Legs wholly or in part, and one or more of the antennal joints, red.
c^4. Femora (except in *L. corallipes*, var.) red; body metallic, shining.
c^5. Prothorax subquadrate; antennae longer and stouter: species larger and robust . *aeneus*, Gorh.
d^5. Prothorax transverse; antennae very short: species smaller.
a^6. Body more convex and less elongate; elytra conjointly rounded at tip . *corallipes*, Gorh.
b^6. Body rather depressed, more elongate; elytra subacuminate at tip . *aeratus*, n. sp.
d^4. Femora infuscate, tibiae and tarsi red; head and prothorax dull, elytra shining; body subcylindrical in ♂: species very small . . . . . *semiopacus*, n. sp.

e^4. Femora and tibiae in part infuscate; body shining, brassy: species very small . . . *metallicus*, Gorh.

c. Antennae short, the penultimate joints transverse, the fifth small, 8–10 forming a definite club; body nigro-aeneous or nigro-violaceous; antennae and legs infuscate, the latter sometimes reddish: species very small . . . . . *pygmaeus*, Gorh.

1. *Listrus subcyaneus.*

Listrus subcyaneus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 125.

♂. Anterior and intermediate tibiae strongly curved, sinuate within, sharply toothed at the inner apical angle; fifth ventral segment with a long, curved, stout, ciliate, horn-like process on each side of the broad median excavation, extending far beyond the apical margin of the segment, the latter with a small polished tubercle in the centre; antennae slender, feebly serrate, joints 5–10 subtriangular, 6–10 about as long as broad, 5 larger than 6, 11 stout, ovate; prothorax strongly rounded at the sides; body narrow.

♀. Antennae a little shorter; prothorax narrowing from about the basal third; body broader.

Hab. Guatemala, Totonicapam and Quezaltenango, in the Los Altos region.

Of the eight specimens seen of this insect, only two are bluish, the others being green or cupreous, the legs and antennae, too, vary, in colour from piceous to almost wholly testaceous. The sparse pubescence noticed by its describer is simply due to abrasion. The single male from Quezaltenango has the elytra very elongate, narrow, and cupreous, and the antennae, tarsi, and apices of the tibiae rufo-testaceous.

2. *Listrus cupreonitens.*

Listrus cupreonitens, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 125, t. 7, fig. 8 (♀).

♂. Anterior and intermediate tibiae strongly curved, sinuate within, toothed at the inner apical angle; fifth ventral segment unimpressed, with a minute dentiform projection at the middle of the apical margin; prothorax strongly rounded at the sides.

Hab. Guatemala, Quiché Mts., Quezaltenango, and near Capetillo.

This species is extremely like *L. subcyaneus*, differing from it in the simple fifth ventral segment of the male. The antennae and tarsi are equally variable in colour. The seven specimens seen are cupreous or plumbeo-cupreous in colour, the prothorax sometimes greenish or golden. The vestiture is very compact in fresh examples. The sexual characters were not described by Gorham. The length varies from 3 to nearly 4 mm.

3. *Listrus subcupreus*, n. sp.

♂. Moderately elongate, narrow, depressed, shining; obscure cupreous with the head and prothorax greenish, or wholly greenish, the antennae (except the first joint at the base above) testaceous, the legs piceous, with the tarsi fusco-testaceous; finely cinereo-pubescent. Head densely punctate; antennae slender, widening outwards, feebly serrate, joint 10 transverse, 11 stout, ovate. Prothorax small, strongly transverse, rounded at the sides, the hind angles subrectangular; closely, minutely punctate. Elytra wider than the prothorax, subparallel in their basal half, moderately elongate; densely, finely punctate. Fifth ventral segment flattened and densely punctate in the middle at the apex, the latter truncate. Anterior and intermediate tibiae bowed towards the apex, sinuate within, toothed at the inner apical angle.

♀. Broader; antennae with the four or five outer joints, and the basal one above, black, 6–10 transverse.

Length $2\frac{1}{4}$–$2\frac{1}{2}$ mm. (♂♀.)

Hab. Guatemala, Guatemala city, Dueñas, Capetillo (*Champion*).

Two males and three females, found mixed with the series named *L. canescens* by Gorham. Smaller and much less elongate than *L. cupreonitens* and *L. subcyaneus*, the antennae and legs shorter, the fifth ventral segment of the male simply flattened in the middle behind.

4. *Listrus flavicornis*, n. sp.

♂. Elongate, the head and prothorax dull, the elytra moderately shining; aeneous, the antennae (the black basal joint excepted), tarsi, and apices of the tibiae, testaceous; clothed with rather long, decumbent, pallid hairs, those on the elytra rather coarse, the curled marginal cilia of the latter long and conspicuous. Head bi-impressed in front, alutaceous, very finely, rather sparsely punctate;

antennae moderately long, slender, feebly serrate, joints 5–10 subtriangular, about as long as broad, 5 larger than 6, 11 ovate, much longer than 10. Prothorax small, transverse, the sides rounded posteriorly and as seen from above sinuate and obliquely converging anteriorly, the hind angles completely obsolete; finely punctate. Elytra much wider than the prothorax, subparallel in their basal half, conjointly rounded at the apex; densely, moderately coarsely punctate throughout. Legs long and slender; tibiae narrow, without definite spinules, the anterior pair sharply toothed at the inner apical angle; posterior tarsi elongate.

♀. Larger and broader, the antennae and tarsi infuscate towards the tip.

Length $3\frac{1}{4}$–$3\frac{1}{2}$ mm.

Hab. Mexico (*Truqui, in Mus. Brit.*, ♂; *Mus. Oxon.*, ♀). One male and two females. This species has the antennae formed very much as in the male of *L. cupreonitens* and its allies, except that the apical joint is not so large, but is not otherwise related to them. The tibiae are feebly setulose (when viewed under the microscope), but there are no definite spinules on their outer edge, and the insect, therefore, seems better placed in *Listrus* than in *Trichochrous*. The relatively small, laterally compressed prothorax is unusual in *Listrus*.

5. *Listrus crenicollis*, n. sp.

Listrus, sp., Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 329.

♂. Elongate, narrow, somewhat convex, shining; of a bright brassy tint, the antennae and legs rufo-testaceous, the apical three joints of the former and the tips of the tarsi infuscate; sparsely pubescent, the marginal cilia of the elytra rather long. Head sparsely, finely punctate; antennae short, rather slender, joints 5–10 serrate, 5 triangular, larger than 6 or 8, 6–10 transverse, 9 and 10 broader than those preceding, 11 short-ovate. Prothorax gibbous, nearly as long as broad, feebly rounded at the sides, narrowed from about the middle, the margins closely, conspicuously crenulate, the hind angles just traceable; closely, finely punctate. Elytra a little wider than the prothorax, subparallel in their basal half, conjointly rounded at the apex; closely and rather coarsely punctured in their basal third, the puncturing thence to the apex much finer and more diffuse. Legs rather slender, the posterior tarsi elongate.

Length $2\frac{1}{3}$, breadth 1 mm.

Hab. Mexico, Jalapa (*Höge*).

One specimen, assumed to be a male. Gorham hesitated to describe this species from a single example; but it is so distinct, and so closely allied to another form subsequently received from Orizaba, that there can be no risk in naming it. The narrow, bright aeneous body, the rather long gibbous prothorax, with conspicuously crenulate lateral margins, the rufous legs, and the long posterior tarsi are characteristic.

6. *Listrus senilis.*

Dasytes senilis, Lec., Proc. Acad. Phil. vi, p. 170 (1852).
Listrus senilis, Lec., op. cit. 1866, p. 358; Casey, Ann. N. York. Acad. Sci. viii, pp. 542, 551, and ix, p. 682.
Listrus canescens, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 126, 329 (*nec* Mann.).
? *Listrus clavicornis*, Casey, loc. cit. viii, pp. 542, 552.

♂. Anterior tibiae armed with a rather stout spur at the inner apical angle; prothorax nearly as broad as the elytra, rounded at the sides; fifth ventral segment truncate at the apex.

♀. Head and prothorax smaller, the latter less rounded at the sides.

Hab. United States, Kansas, Colorado, New Mexico, Arizona, Texas; Mexico; Guatemala; Panama.

A common N.-American species extending southward along the mountains to Chiriqui. In typical examples the prothorax is very densely punctulate and opaque; but amongst some of those before me from Guatemala the puncturing is more scattered and the interspaces shining, these latter doubtless belonging to *L. clavicornis*, Casey. The aeneous (not black, as stated by Casey) body, the uniform long, close, cinereous vestiture, and the black legs and antennae mainly distinguish *L. senilis*. Specimens from Texas (*Mus. Oxon.*) agree exactly with others before me from Mexico.

7. *Listrus albidus*, n. sp.

Moderately elongate, rather broad, opaque; fusco-olivaceous, the antennae (except the basal joint and one or more of the apical ones, which are infuscate) and legs (the tips of the tarsi excepted) rufo-testaceous; thickly clothed with adpressed white hairs, the marginal cilia short. Head very densely punctulate; antennae short, widened outwards, joints 5–10 serrate, 5 triangular, larger than 6, 6–10 transverse, 9 and 10 much broader than 8, 11 ovate.

Prothorax transverse, nearly as wide as the elytra, narrowing from near the base, the sides rounded posteriorly and obliquely converging forwards; very densely punctulate. Elytra moderately long, subparallel in their basal third; impressed with minute punctures, which are much more scattered than those on the prothorax. Legs comparatively short.

Length 2¾–3¼ mm.

Hab. Mexico, Chilpancingo and Amula in Guerrero, 4,600–6,000 feet (*H. H. Smith*).

Four specimens, probably including both sexes, the supposed males having the prothorax a little more developed than the others; one female is in very fresh condition. The olivaceous, albo-pilose, opaque, minutely punctured upper surface and red legs are characteristic of the present species. *L. albidus* is related to *L. senilis*, Lec.

8. *Listrus punctatulus*, n. n.

Listrus punctatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 126 (part.), (*nec* Motsch.).

♂. Head very broad; antennae widened outwards, joints 5–10 serrate, 5 triangular, larger than 4, 6, or 8, these latter small, 6–10 transverse, 9 and 10 wider than 7, 11 short-ovate; prothorax large, as wide as the elytra, convex, rounded at the sides, narrowed in front; fifth ventral segment unimpressed, truncate at the apex.

♀. Head much smaller; antennae shorter and more slender; prothorax smaller, a little narrower than the elytra, narrowed from near the base.

Hab. Guatemala, Santa Rosa and San Gerónimo, both near Salama, in Baja Vera Paz.

Gorham confused various species under the name *L. punctatus*, the pair labelled by him as "types," and from which the brief description was evidently taken, being from Santa Rosa. The sexes differ greatly, the male having an unusually broad head and prothorax. In its robust build, the aeneous, rather coarsely cinereo-pubescent upper surface, and the strongly punctured basal portion of the elytra, *L. punctatulus* is very like certain *Trichochrous* (such as the Mexican *T. nigripes*), from which the smoother, non-setulose tibiae, the very short marginal cilia of the elytra, etc., will distinguish it. Three males and four females are before me. The specific name, as pointed out by Casey (Ann. N. York Acad. Sci. ix, p. 682), is preoccupied.

9. *Listrus versicolor.*

Listrus versicolor, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 126.

♂. Head broad; prothorax strongly rounded at the sides, gradually narrowed anteriorly, and also narrowed behind, about as wide as the elytra, the latter subparallel; fifth ventral segment truncate at the apex; anterior tibiae with a short, stout, blunt tooth at the inner apical angle.

♀. Prothorax smaller, narrowed from near the base; elytra broader and less parallel.

Hab. Guatemala, Ostuncalco [♀] and Quezaltenango [♂], in the Los Altos region.

The six specimens referred by me to *L. versicolor* (3 ♂ and 3 ♀) vary in colour from wholly greenish or bluish-green to green with the head and prothorax brassy or golden, the colour of the latter being partly due to the denser yellowish vestiture on these portions of the upper surface. The head and prothorax are densely and finely, the elytra rather coarsely, punctate. The two examples marked by the author as the " types " are large females from Ostuncalco, with broad, conspicuously margined elytra and long cilia. The abraded males from Quezaltenango are much narrower, but they seem to belong to the same species. These latter come extremely close to some of the forms of the very variable *L. senilis*, Lec., differing from them in the finer and more scattered vestiture.

10. *Listrus ciliatipennis*, n. sp.

Listrus punctatus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 329 (*nec* p. 126).

♂. Moderately elongate, rather depressed, feebly shining; aeneous or greenish-aeneous above, black beneath, the legs and antennae piceous; clothed with fine adpressed cinereous pubescence, the curled marginal cilia of the elytra rather long and conspicuous. Head broad, densely, rugulosely punctate; antennae as in *L. punctatulus*. Prothorax about as wide as the elytra, transverse, rounded at the sides, narrowed in front; closely, minutely punctate, the interspaces usually dull and alutaceous. Elytra subparallel in their basal half, with rather prominent marginal carina; more coarsely and rugosely punctured in their basal third than on the rest of their surface, the punctures becoming minute towards the apex. Fifth ventral segment unimpressed, truncate at the apex. Legs slender.

♀. Head a little smaller; prothorax less rounded at the sides narrowed from near the base, distinctly narrower than the elytra.

Length $2\frac{1}{10}$–$2\frac{1}{2}$ mm.

Hab. Panama, Peña Blanca, above Tolé.

Found in plenty on flowers, on the savannas, in January, 1883. Smaller and much less robust than the Guatemalan *L. punctatulus*, the puncturing of the elytra not nearly so coarse, the marginal cilia longer and more conspicuous, the sexual differences less marked. Abraded examples appear to be more shining than those with the fine vestiture intact. The colour varies from brassy to green. The Guatemalan *L. versicolor*, Gorh., is an allied larger form, with much broader elytra in the female, etc.

11. *Listrus aeneus.*

Listrus aeneus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 125.

The type of this insect, labelled by the author, is a female from Panima, Guatemala; the second example, from Oaxaca, Mexico, was retained by him, and we may be permitted to doubt whether it really belonged to the same species. *L. aeneus* (♀) is an elongate-oval, bright brassy insect, not unlike the type (♀) of *L. corallipes*; but it is larger and longer, with a longer, smoother, subquadrate prothorax, stouter antennae, etc. The fifth antennal joint is triangular, and larger than the sixth or eighth, and the ninth and tenth are stout and transverse.

12. *Listrus corallipes.*

Listrus corallipes, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 127 (part.).

Hab. Guatemala, Vera Paz.

Two totally different species were placed under this name by Gorham: the type, from Guatemala, is a *Listrus*; the other specimen, from Toxpam, Mexico, has a slender fifth tarsal joint, simple, very slender claws, a stout, oblong apical joint to the antennae, etc., and, therefore, belongs elsewhere (cf. under *Mecomycter*, infra). The type of *L. corallipes*, from San Joaquin, is smaller than *L. punctatulus*, and has shorter antennae (which otherwise are similarly formed), a relatively smaller, subcampanulate prothorax, and red antennae (the basal and apical joints

excepted) and legs. Another female, from San Gerónimo, with darker legs and antennae probably belongs here.

13. *Listrus aeratus*, n. sp.

♀. Elongate, widened posteriorly, feebly convex, shining; of a bright brassy or greenish tint, joints 2–4 of the antennae, and the legs (the tips of the tarsi excepted), rufo-testaceous, for the rest infuscate; finely cinereo-pubescent, the marginal cilia of the elytra rather long. Head comparatively small, finely punctulate; antennae very short, widened outwards, joints 5–10 serrate, 5 triangular, larger than 6, 6–10 transverse, 9 and 10 broader than 8, 11 short-ovate. Prothorax transverse, convex, obliquely narrowed from about the middle forwards, the hind angles distinct; closely, minutely punctate. Elytra considerably wider than the prothorax, narrowing from a little beyond the middle, somewhat acuminate at the tip; closely and somewhat coarsely punctate in their basal third, the puncturing thence to the apex much finer and more diffuse.

Length $2\frac{1}{4}$–$2\frac{4}{5}$ mm.

Hab. Mexico, Orizaba (*F. D. Godman and H. H. Smith*).

Four specimens, apparently all females. Less convex than *L. crenicollis*, the prothorax shorter and flatter, and much more finely crenulate along the sides. From *L. corallipes*, Gorh., it may be known by its more elongate, less convex form, subacuminate elytra, more shining surface, etc.

14. *Listrus semiopacus*, n. sp.

♂. Narrow, subcylindrical, somewhat convex, moderately elongate, the head and prothorax dull, the elytra shining; black, with a slight aeneous lustre, the second joint of the antennae, and the tibiae and tarsi (except at the tips), rufescent; finely pubescent. Head broad, and except along the smooth raised central portion of the epistoma, opaque, densely, rugulosely punctate; antennae short, joints 5–10 strongly transverse, 5 a little broader than 6, and 9 and 10 slightly wider than 8, 11 ovate. Prothorax transverse, broad, rounded at the sides posteriorly, obliquely, narrowed in front; densely, rugulosely punctate, with an indication of a short smooth median line. Elytra subparallel in their basal half, very little wider than the prothorax, conjointly rounded at the apex; densely, finely punctate, the puncturing becoming a little coarser at the base. Intermediate tibiae with a stout blunt tooth at the inner apical angle.

♀. Head and prothorax a little narrower, the latter less rounded at the sides posteriorly.

Length $1\frac{9}{10}$–$2\frac{1}{10}$ mm. (♂ ♀.)

Hab. Mexico, Orizaba (*F. D. Godman and H. H. Smith*).

Two males and one female. An isolated form, recognisable by its small size, the opaque head and prothorax, the red tibiae and tarsi, the subparallel elytra, etc. It is more elongate than *L. pygmaeus* and *L. metallicus*.

15. *Listrus metallicus.*

Listrus metallicus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 127.

Hab. Guatemala, Cerro Zunil, Pacific slope.

A comparatively short, minute, brassy or golden insect, with fine, scattered yellowish pubescence, and rather coarsely punctate surface, the femora and tibiae more or less infuscate. The fifth antennal joint is, as usual, larger than the sixth, and the ninth and tenth joints are widened and transverse. The types are evidently male and female.

16. *Listrus pygmaeus.*

Listrus pygmaeus, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 329.

Hab. Panama, Peña Blanca and Tolé.

Smaller than *L. metallicus*, nigro-violaceous or nigro-aeneous in colour, the puncturing much finer, the pubescence very fine, the fifth antennal joint small. The antennal joints 6–10 are transverse, 9 and 10 are wider than those preceding, 5 not larger than 6. The legs are described as rufous, but this is not quite correct, as they are partly or wholly infuscate in the long series before me.

Dasytellus.

Dasytellus, Casey, Ann. N. York Acad. Sci. viii, pp. 459, 564 (1895).

The few described species of this genus inhabit the arid regions of the South-Western States of N. America. *Listrus impressus*, Gorh., belongs to it. They are minute insects related to *Listrus*, from which they differ in having an impressed submarginal line on each side of the prothorax.

1. *Dasytellus impressus.*

Listrus impressus, Gorh., Biol. Centr.-Am., Coleopt., iii, 2, p. 329 (1886).
Dasytellus subovalis, Casey, loc. cit. pp. 565, 570 (1895).

Hab. United States, Arizona and Texas; N. Mexico, Sonora.

The six specimens before me from Sonora include both sexes, the males being narrower than the females and having the fifth ventral segment subtruncate at the tip. The above synonymy has been noticed by Casey (op. cit. ix, p. 682).

Dasytes.

Dasytes, Paykull, Faun. Suec. ii, p. 156 (1798); Gorham, Biol. Centr.-Am., Coleopt. iii, 2, p. 326 (1886); Casey, Ann. N. York Acad. Sci. viii, pp. 459, 571 (1895).

Casey restricts *Dasytes*, so far as the N.-American forms are concerned, to those species of " Dasytini " which have the anterior tibiae slender and devoid of spinules, the ungual appendages equal, but very short or rudimentary, and the pronotum with a roughly sculptured and abruptly limited marginal area. He enumerated 14 species nearly all of which are confined to the Pacific Coast region. The more widely distributed *D. hudsonicus*, Lec., extends southward to Colorado, Arizona, and Sonora, whence Gorham has recorded it on the strength of numerous specimens sent by Morrison.

Mecomycter.

Mecomycter, Horn, Trans. Am. Ent. Soc. x, p. 125 (1882); Casey, Ann. N. York Acad. Sci. viii, pp. 459, 595 (1895).

This genus was based upon a single species, from Kansas, with extremely slender, simple, tarsal claws and an elongate head, Casey subsequently adding a second (the type of which was without a head), which he supposed to be from Arizona. A Mexican insect with simple slender claws, included by Gorham under his *Listrus corallipes*, must be closely allied to *M. facetus*, Casey, differing from *M. omalinus*, Horn, in having a short head, clavate antennae, etc.

1. *Mecomycter testaceipes*, n. sp.

Listrus corallipes, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, p. 127 (part.).

Moderately elongate, the head and prothorax dull, the elytra moderately shining; nigro-piceous, joints 1–6 of the antennae and the legs rufo-testaceous; clothed with an extremely fine adpressed pubescence (giving a pruinose appearance to the surface), the marginal cilia wanting. Head about as long as broad, bi-impressed in front, densely, finely punctate, the epistoma somewhat produced, transverse; antennae short, much widened outwards, joints 3–6 slender, 7–10 strongly transverse, 7 and 8 equal, much wider than 6, 9 and 10 broader than 8, stout, 11 oblong-ovate, nearly as wide as 10, longer than 9 and 10 united. Prothorax, narrow, transverse, convex, laterally compressed, subconical, with a small angular projection on each side towards the base, the marginal carina inferior, the hind angles distinct; densely, finely, uniformly punctate. Elytra, very much wider than the prothorax, oblong, rather depressed, subparallel at the base, less than twice as long as wide, incompletely covering the abdomen, with prominent tumid humeri; rather sparsely, minutely punctate and transversely rugulose. Legs slender; tibiae with a few extremely minute spinules on their outer edge; fifth tarsal joint cylindrical, the claws extremely slender, simple.

Length $2\frac{1}{2}$, breadth $1\frac{1}{6}$ mm.

Hab. Mexico, Toxpam (*Sallé*).

One specimen, probably a male, differing from *M. facetus*, Casey, to judge from the description, in having the prothorax and elytra much more finely punctured, the body uniformly piceous, the vestiture very fine and wholly decumbent, etc.

Subfam. *MELYRINAE.*

Melyrodes.

Melyrodes, Gorh., Biol. Centr.-Am., Coleopt. iii, 2, pp. 128 (1882), 331 (1886).

Alymeris, Casey, Ann. N. York Acad. Sci. viii, p. 600 (1895).

A genus including a few species from North and Central America, two being now added from the last-named region. The synonymy has already been noted by Casey (op. cit. ix, p. 682).

3. *Melyrodes serricauda*, n. sp.

Elongate, narrow, the head and prothorax opaque, the elytra feebly shining; nigro-piceous, the elytra dark brown, the antennal joints 1–4 (except the upper side of 1), the extreme base of the tibiae, and the tarsi testaceous; clothed with very fine, short, decumbent, fuscous pubescence. Head densely, shallowly, rugosely punctate; antennae short, joints 3 and 4 very small, 5–10 strongly transverse, about equal in width, 5–7 triangular, 8–10 shorter, 11 ovate, narrower than 10. Prothorax strongly transverse, rounded at the sides posteriorly, narrowed in front, the anterior margin reflexed, the hind angles distinct, the lateral margins closely crenulate or serrulate; densely, shallowly, rugosely punctate. Elytra long, a little wider than the prothorax, subparallel or gradually widened posteriorly; very coarsely, densely, subseriately, punctate, and distinctly bi- or tricostate, the suture also raised; the explanate epipleural margin becoming wider at the apex and dehiscent at the sutural angle, its inner inferior margin sharply and closely serrate from about the apical third to the suture, the teeth at the apex projecting beyond the upper (outer) epipleural margin, the apex itself rather narrow.

Length 2 mm.

Hab. Panama, Tolé (*Champion*).

Two specimens, found on flowers on the open savanna, in January, 1883. Gorham, apparently, by some oversight, included these examples under his *M. perforata*, though he labelled one of them *M. crenata*. The form of the apex of the elytra is suggestive of that of various Hispidae. In one example there is a well-defined submarginal ridge on the elytra, in addition to the two others on the disc. The Guatemalan *M. crenata* has the antennal joints 5–10 much less transverse, and the elytra broader, less explanate and almost conjointly rounded at the apex, and the costae wholly wanting; *M. perforata*, from San Lorenzo, Panama, has the elytra shining, still more coarsely, confusedly punctate, without trace of costae (the stout sutural ridge excepted), and the inner inferior epipleural margin non-serrate. *M. cupripennis*, Pic, has brilliant cupreous elytra.

4. *Melyrodes cupripennis.*

Melyrodes cupripennis, Pic, Le Naturaliste, 1898, p. 273.

" Peu allongé, à peine pubescent, noir presque mat sur la tête et